Bulkhead-Style Optical Panels

Telect LCX Series

The network's ubiquitous solution for deploying, protecting, and managing fiber.
For every network. For every nation.

LCX Series
everything guide

Overview
Datasheets
Cross-Reference Guide/
Order Guide
Installation Guide

we simplify networks.™

Telect

about us :: about you

It's time to generate more revenue. It's time to rev your network velocity.

It's time to simplify your network.

It's clear. You need to connect, power, protect, and manage your revenue stream. You need intuitive system integration, fast lead times, and unyielding reliability. You need a global network manufacturer who dominates demanding network requirements, and a team who understands network trajectory and gets the whole picture, from the central office to the edge. You need a futuristic manufacturer today.

It's not about anybody else. **It's about you.**

It's about buying you-centric equipment. It's about using a network manufacturer that grasps your vision for the future and knows how to build it, backed by a history of network innovation; a deep portfolio of integrated, cross-sector network equipment; and the best team on earth.

At Telect, you get more than the crucial equipment you need to build and maintain your network. You get solutions for network dominance.

Telect :: **We simplify networks.**

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www.telect.com
Contact Telect for more information and for assistance with configuring a solution.
getinfo@telect.com :: 1.509.926.6000

LCX-H

Bulkhead-style patching and splicing. With hinge benefits.

Meet Telect's ubiquitous patch and splice panel. With hinge benefits.

Managing and protecting fiber just got simpler.

With the product launch of LCX-H, a total front-access, bulkhead-style panel, Telect blazes ahead in fiber-optic equipment innovation with a reversible hinge. From now on, you don't have to decide the destiny of your hinged swing before it leaves the factory. Now, when you're maneuvering tight network spaces in central offices, switches, or data centers, you can get total front access and the on-site freedom to install the bulkhead to swing either left or right.

One more step toward total network flexibility.

Telect also escalated bend radius management and laser protection by engineering LGX®-compatible, angled adapter plates into the LCX-H.

Telect designed the LCX-H to be the industry's model bulkhead-style panel.

From the hinged bulkhead; to the adapter plates; to the front-to-back, pass-through cables within the chassis; to superior cable management; to thorough fiber protection; to competitive pricing; to a cutthroat lead-time of 24-48 hours— Telect's LCX-H panel is the clear solution for simple fiber protection and management in all networks.

You're going to love hinge benefits.

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LCX-H datasheet

datasheet

Benefits

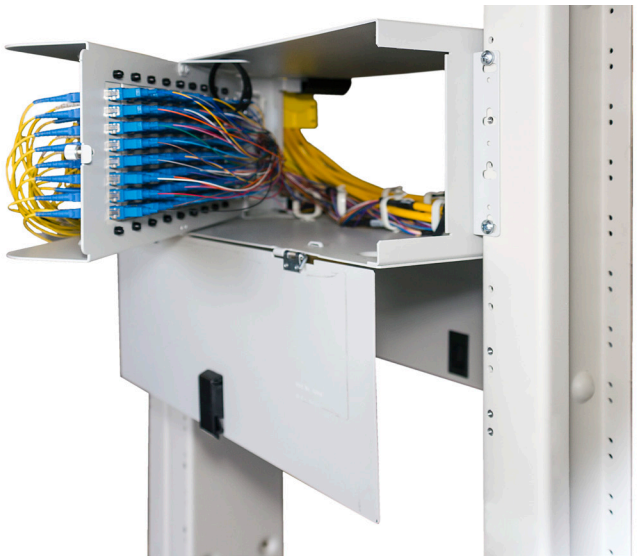
- Flexible hinged bulkhead for right or left exits
- Cutouts for fiber pass-through within the chassis
- Premium-grade Senko adapters
- A LGX® compatible system
- Angled adapter plates for any LGX® compatible system

Applications

- Central office
- Data center
- Optical distribution frame
- Fiber distribution within equipment room
- Total front access

Capacities/Capabilities/Suitability

- LCX-H panels are available for universal 19-in., 23-in., and ETSI racks.
- 12-144 (LC) termination capacities per panel (1 RU through 4 RU) using site-installed patch plates. Up to 144 terminations per panel with factory-installed discrete adapters.
- Standard-size 6, 8, 12, or 24 adapters per patch plate for on-site patch panel adaptation of empty panels.
- Standard-size Wavelength Division Multiplexing (WDM) and splitter modules can be used along with adapter packs for added flexibility.
- All LCX Patch/Splice Panels are fully compatible with standard LGX® style panels for IFC entrance, splicing, and network patching architecture.
- 2 RU through 4 RU models include slip-on, split arcs for patch cord entrance; optional cable management kits are available to suit operating company preferences.



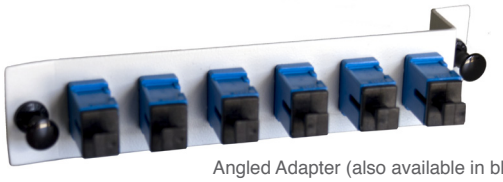
Specifications

Dimensions and Weights	
All Panels	17" W (432 mm), 11" D (280 mm)
1 RU patch or splice panel	1.75" H (44 mm), 5 lbs (2.27 kg)
2 RU patch or splice panel	3.5" H (89 mm), 6 lbs (2.72 kg)
3 RU patch or splice panel	5.25" H (133 mm), 7 lbs (3.18 kg)
4 RU patch or splice panel	7" H (178 mm), 8 lbs (3.63 kg)
2 RU combination panel	3.5" H (89 mm), 10 lbs (4.54 kg)
4 RU combination panel	7" H (282 mm), 12 lbs (5.44 kg)
6 RU combination panel	10.5" H (267 mm), 14 lbs (6.35 kg)
8 RU combination panel	14" H (356 mm), 16 lbs (7.26 kg)

Mechanical	
Enclosure type	Rack-mount panel
Capacity	12, 24, 48, 72, 96, 144 (LC only) ports based on configuration
Connector type	LC, LC quad, SC, SC duplex, ST, FC or MPO based on configuration
Material	Aluminum
Panel mounting	19" or 23"

Environmental	
Humidity	0 to 90%, non-condensing
Temperature	-5 to 55 deg. C

Compliance	
Agency compliance	NEBS, ETSI, Zone 4 Seismic reliability
Mounting	19-in. or 23-in. with ETSI, EIA, or WECO spacing



Angled Adapter (also available in black)

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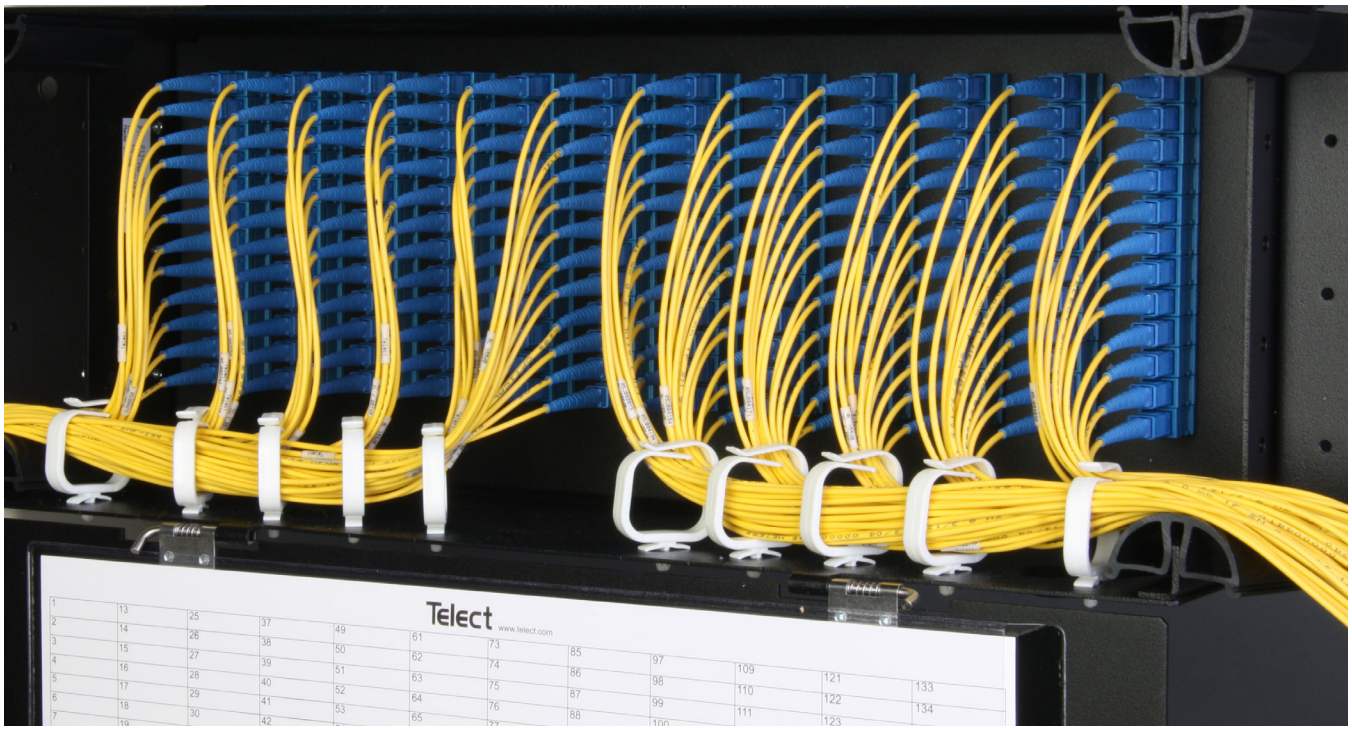
LCX Series

Protect and manage fiber with confidence. In every network. In every nation.



Deploy fiber with confidence.

Telect's LCX bulkhead-style panels are fundamental for your fiber network. As the ubiquitous fiber management solution for cost-effective patching, splicing, and splitting across all networks, LCX bulkhead-style panels protect fiber and build sustainability into your infrastructure.

Everybody's talking about the LCX.

Money-smarts**.** Brains. Potential. Good looks. Even some charm.

Find it all in the LCX series.

Money-smarts :: From CAPEX to OPEX, LCX helps you maintain a green bottom line.

Brains :: Telect engineers get cerebral about fiber protection. LCX simplifies patching, splicing, and splitting, from fiber bend radius protection; to standard 19**"**, 23**"**, or ETSI footprints; to LGX®-compatibility; to NEBS certification; to superior integrated cable management; to densities from 12 to 144 terminations; to hinged bulkhead-style panel configurations and adapter plates. LCX panels fit the network.

Potential :: LCX's minimal footprint—from 1 to 4 RUs—leaves plenty of space for other equipment. The NEBS Level 3 certification ensures that you're investing in network sustainability, and the modularity enables you to build future revenue opportunities into your network.

The good looks and charm are bonuses. But we think you'll appreciate them.

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LCX Series datasheet

datasheet

Benefits

Telect's LCX Splice/Patch Panels are ideal for central office, head-end and wiring centers. Benefits include:

- Compliance in design
- Bend radius management
- Flammability safety
- Structural reliability
- Lightweight construction
- Standard footprint
- Simple installation
- Scalability to help manage costs
- Pre-loaded configurations to accelerate deployment

Applications

- CATV
- MTSO
- Outside plant
- Central office
- Optical distribution/cross-connect

Capacities/Capabilities/Suitability

- LCX panels are available for universal 19-in., 23-in., and ETSI racks.
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- Standard-size 6, 8, 12 or 24 adapters per patch plate for on-site patch panel adaptation of empty panels.
- Standard-size Wavelength Division Multiplexing (WDM) and splitter modules can be used along with adapter packs for added flexibility.
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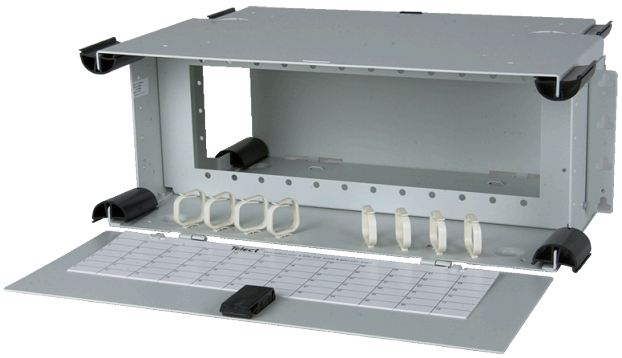

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LCX-H competitive cross-reference/ordering guide

LCX-H Chassis Only

Description	Competitor Part Number	Telect Part Number	Quantity
LCX Hinged Splice/Patch Chassis 24 Fiber, 4 RU	FL2-24TS525	**LCX-HC4 RU**	
LCX Hinged Splice/Patch Chassis 48 Fiber, 6 RU	FL2-48TS875	**LCX-HC6 RU**	
LCX Hinged Splice/Patch Chassis 72/96 Fiber, 8 RU	FL2-72TS140	**LCX-HC8 RU**	
LCX Hinged Patch Chassis 24 Fiber, 2 RU	FL2-24RPNL	**LCX-H2 RU**	
LCX Hinged Patch Chassis 48 Fiber, 3 RU	FL2-48RPNL	**LCX-H3 RU**	
LCX Hinged Patch Chassis 72/96 Fiber, 4 RU	FL2-72RPNL	**LCX-H4 RU**	
LCX Splice Chassis 24 Fiber, 2 RU		**LCX-S2 RU**	
LCX Splice Chassis 48 Fiber, 3 RU	FL2-48SPNL	**LCX-S3 RU**	
LCX Splice Chassis 72/96 Fiber, 4 RU	FL2-96SPNL	**LCX-S4 RU**	
LCX Hinged Splice/Patch Chassis 48 Fiber, 6 RU		**LCX-HC6 RU-BLK**	
LCX Hinged Splice/Patch Chassis 72/96 Fiber, 8 RU		**LCX-HC8 RU-BLK**	
LCX Hinged Patch Chassis 24 Fiber, 2 RU		**LCX-H2 RU-BLK**	
LCX Hinged Patch Chassis 48 Fiber, 3 RU		**LCX-H3 RU-BLK**	
LCX Hinged Patch Chassis 72/96 Fiber, 4 RU		**LCX-H4 RU-BLK**	
LCX Splice Tray - 24 Fiber RoHs		**LCX-S-HSF**	

LCX-H Configured Patch Only Panels :: For black add -BLK

Description	Competitor Part Number	Telect Part Number	Quantity
LCX-Hinged 24 Patch, FC/APC, 19/23" Std 2 RU		**LCX-HP241D**	
LCX-Hinged 24 Patch, FC/UPC, 19/23" Std. 2 RU	FL2-R220024A0-0A00	**LCX-HP241F**	
LCX-Hinged 24 Patch, LC/APC, 19/23" Std. 2 RU	FL2-R2B0024A0-0A00	**LCX-HP241G**	
LCX-Hinged 24 Patch, LC/UPC, 19/23" Std. 2 RU	FL2-R280024A0-0A00	**LCX-HP241L**	
LCX-Hinged 24 Patch, LC Multimode, 19/23" Std. 2 RU	FL2-R260024A0-0A00	**LCX-HP241L-MM**	
LCX-Hinged 24 Patch, SC/APC, 19/23" Std. 2 RU	FL2-R2J0024A0-0A00	**LCX-HP241N**	
LCX-Hinged 24 Patch, SC/UPC, 19/23" Std. 2 RU	FL2-R270024A0-0A00	**LCX-HP241S**	
LCX-Hinged 24 Patch, SC Multimode, 19/23" Std. 2 RU	FL2-R290024A0-0A00	**LCX-HP241S-MM**	
LCX-Hinged 24 Patch, ST/UPC, 19/23" Std. 2 RU		**LCX-HP241T**	
LCX-Hinged 48 Patch, FC/APC, 19/23" Std. 3 RU		**LCX-HP481D**	
LCX-Hinged 48 Patch, FC/UPC, 19/23" Std. 3 RU	FL2-R420048A0-0A00	**LCX-HP481F**	
LCX-Hinged 48 Patch, LC/APC, 19/23" Std. 2 RU	FL2-R4B0048A0-0A00	**LCX-HP481G**	
LCX-Hinged 48 Patch, LC/UPC, 19/23" Std. 2 RU	FL2-R480048A0-0A00	**LCX-HP481L**	
LCX-Hinged 48 Patch, LC Multimode, 19/23" Std. 2 RU	FL2-R460048A0-0A00	**LCX-HP481L-MM**	
LCX-Hinged 48 Patch, SC/APC, 19/23" Std. 3 RU	FL2-R4J0048A0-0A00	**LCX-HP481N**	
LCX-Hinged 48 Patch, SC/UPC, 19/23" Std. 3 RU	FL2-R470048A0-0A00	**LCX-HP481S**	
LCX-Hinged 48 Patch, SC Multimode, 19/23" Std. 3 RU	FL2-R490048A0-0A00	**LCX-HP481S-MM**	
LCX-Hinged 48 Patch, ST/UPC, 19/23" Std. 3 RU		**LCX-HP481T**	
LCX-Hinged 72 Patch, FC/APC, 19/23" Std. 4 RU		**LCX-HP721D**	
LCX-Hinged 72 Patch, FC/UPC, 19/23" Std. 4 RU	FL2-R720072A0-0A00	**LCX-HP721F**	
LCX-Hinged 72 Patch, LC/APC, 19/23" Std. 3 RU	FL2-R7B0072A0-0A00	**LCX-HP721G**	
LCX-Hinged 72 Patch, LC/UPC, 19/23" Std. 3 RU	FL2-R780072A0-0A00	**LCX-HP721L**	
LCX-Hinged 72 Patch, LC Multimode, 19/23" Std. 3 RU	FL2-R760072A0-0A00	**LCX-HP721L-MM**	
LCX-Hinged 72 Patch, SC/APC, 19/23" Std. 4 RU	FL2-R7J0072A0-0A00	**LCX-HP721N**	
LCX-Hinged 72 Patch, SC/UPC, 19/23" Std. 4 RU	FL2-R770072A0-0A00	**LCX-HP721S**	
LCX-Hinged 72 Patch, SC Multimode, 19/23" Std. 4 RU	FL2-R790072A0-0A00	**LCX-HP721S-MM**	
LCX-Hinged 72 Patch, ST/UPC, 19/23" Std. 4 RU		**LCX-HP721T**	
LCX-Hinged 96 Patch, LC/APC, 19/23" Std. 3 RU	FL2-R9B0096A0-0A00	**LCX-HP961G**	
LCX-Hinged 96 Patch, LC/UPC, 19/23" Std. 3 RU	FL2-R980096A0-0A00	**LCX-HP961L**	

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LCX-H competitive cross-reference/ordering guide

LCX-H Configured Patch/Splice Combo Panels

Description	Competitor Part Number	Telect Part Number	Quantity
LCX-Hinged 24 Patch/Splice, FC/APC, 19/23" Std. 4 RU		**LCX-HC241D**	
LCX-Hinged 24 Patch/Splice, FC/UPC, 19/23" Std. 4 RU	FL2-C220024P2-2A00	**LCX-HC241F**	
LCX-Hinged 24 Patch/Splice, LC/APC, 19/23" Std. 3 RU	FL2-C2B0024P2-2A00	**LCX-HC241G**	
LCX-Hinged 24 Patch/Splice, LC/UPC, 19/23" Std. 3 RU	FL2-C260024P2-2A00	**LCX-HC241L**	
LCX-Hinged 24 Patch/Splice, LC Multimode,19/23" Std. 3 RU	FL2-C280024P2-2A00	**LCX-HC241L-MM**	
LCX-Hinged 24 Patch/Splice, SC/APC, 19/23" Std. 4 RU	FL2-C2J0024P2-2A00	**LCX-HC241N**	
LCX-Hinged 24 Patch/Splice, SC/UPC, 19/23" Std. 4 RU	FL2-C270024P2-2A00	**LCX-HC241S**	
LCX-Hinged 24 Patch/Splice, SC Multimode,19/23" Std. 4 RU	FL2-C290024P2-2A00	**LCX-HC241S-MM**	
LCX-Hinged 24 Patch/Splice, ST/UPC, 19/23" Std. 4 RU		**LCX-HC241T**	
LCX-Hinged 48 Patch/Splice, FC/APC, 19/23" Std. 6 RU		**LCX-HC481D**	
LCX-Hinged 48 Patch/Splice, FC/UPC, 19/23" Std. 6 RU	FL2-C420048P2-4A00	**LCX-HC481F**	
LCX-Hinged 48 Patch/Splice, LC/APC, 19/23" Std. 5 RU	FL2-C4B0048P2-4A00	**LCX-HC481G**	
LCX-Hinged 48 Patch/Splice, LC/UPC, 19/23" Std. 5 RU	FL2-C4B0048P2-4A00	**LCX-HC481L**	
LCX-Hinged 48 Patch/Splice, LC Multimode,19/23" Std. 5 RU	FL2-C480048P2-4A00	**LCX-HC481L-MM**	
LCX-Hinged 48 Patch/Splice, SC/APC, 19/23" Std. 6 RU	FL2-C4J0048P2-4A00	**LCX-HC481N**	
LCX-Hinged 48 Patch/Splice, SC/UPC, 19/23" Std. 6 RU	FL2-C470048P2-4A00	**LCX-HC481S**	
LCX-Hinged 48 Patch/Splice, SC Multimode, 19/23" Std. 6 RU	FL2-C490048P2-4A00	**LCX-HC481S-MM**	
LCX-Hinged 48 Patch/Splice, ST/UPC, 19/23" Std. 6 RU		**LCX-HC481T**	
LCX-Hinged 72 Patch/Splice, FC/APC,19/23" Std. 8 RU	FL2-C720072P2-6A00	**LCX-HC721D**	
LCX-Hinged 72 Patch/Splice, FC/UPC, 19/23" Std. 8 RU	FL2-C7B0072P2-6A00	**LCX-HC721F**	
LCX-Hinged 72 Patch/Splice, LC/APC, 19/23" Std. 7 RU	FL2-C760072P2-6A00	**LCX-HC721G**	
LCX-Hinged 72 Patch/Splice, LC/UPC, 19/23" Std. 7 RU	FL2-C780072P2-6A00	**LCX-HC721L**	
LCX-Hinged 72 Patch/Splice, LC Multimode, 19/23" Std. 7 RU	FL2-C7J0072P2-6A00	**LCX-HC721L-MM**	
LCX-Hinged 72 Patch/Splice, SC/APC, 19/23" Std. 8 RU	FL2-C770072P2-6A00	**LCX-HC721N**	
LCX-Hinged 72 Patch/Splice, SC/UPC, 19/23" Std. 8 RU	FL2-C790072P2-6A00	**LCX-HC721S**	
LCX-Hinged 72 Patch/Splice, SC Multimode, 19/23" Std. 8 RU		**LCX-HC721S-MM**	
LCX-Hinged 96 Patch/Splice, LC/APC, 19/23" Std. 7 RU	FL2-C960096P2-8A00	**LCX-HC961G**	
LCX-Hinged 96 Patch/Splice, LC/UPC, 19/23" Std. 7 RU	FL2-C980096P2-8A00	**LCX-HC961L**	
LCX-Hinged 96 Patch/Splice, LC Multimode, 19/23" Std. 7 RU	FL2-C9J0096P2-8A00	**LCX-HC961L-MM**	

LCX-H Angled Adapter Plates (for black add -V and -BLKV)

Description	Competitor Part Number	Telect Part Number	Quanitity
Patch Plate, Blank	FL2-6PBLNK	**055-0000-9000**	
Angled Patch Plate, 6-Port, FC/UPC	FL2-6PSMFC	**055-0000-2A10**	
Angled Patch Plate, 6-Port, FC/APC	No Direct Cross	**055-0000-2A70**	
Angled Patch Plate, 8-Port, FC/UPC	No Direct Cross	**055-0000-2A80**	
Angled Patch Plate, 8-Port, FC/APC	No Direct Cross	**055-0000-2A90**	
Angled Patch Plate, 6-Port, ST/UPC	No Direct Cross	**055-0000-3A10**	
Angled Patch Plate, 8-Port, ST/UPC	No Direct Cross	**055-0000-3A80**	
Angled Patch Plate, 12-Port, LC/UPC	FL2-6PSMLC	**055-0000-5A10**	
Angled Patch Plate, 12-Port, LC Multimode	FL2-6PMMLC	**055-0000-5A12**	
Angled Patch Plate, 12-Port, LC/APC	FL2-6PSMALC	**055-0000-5A90**	
Angled Patch Plate, 16-Port, LC/UPC	No Direct Cross	**055-0000-5A11**	
Angled Patch Plate, 16-Port, LC Multimode	No Direct Cross	**055-0000-5A13**	
Angled Patch Plate, 16-Port, LC/APC	No Direct Cross	**055-0000-5A91**	

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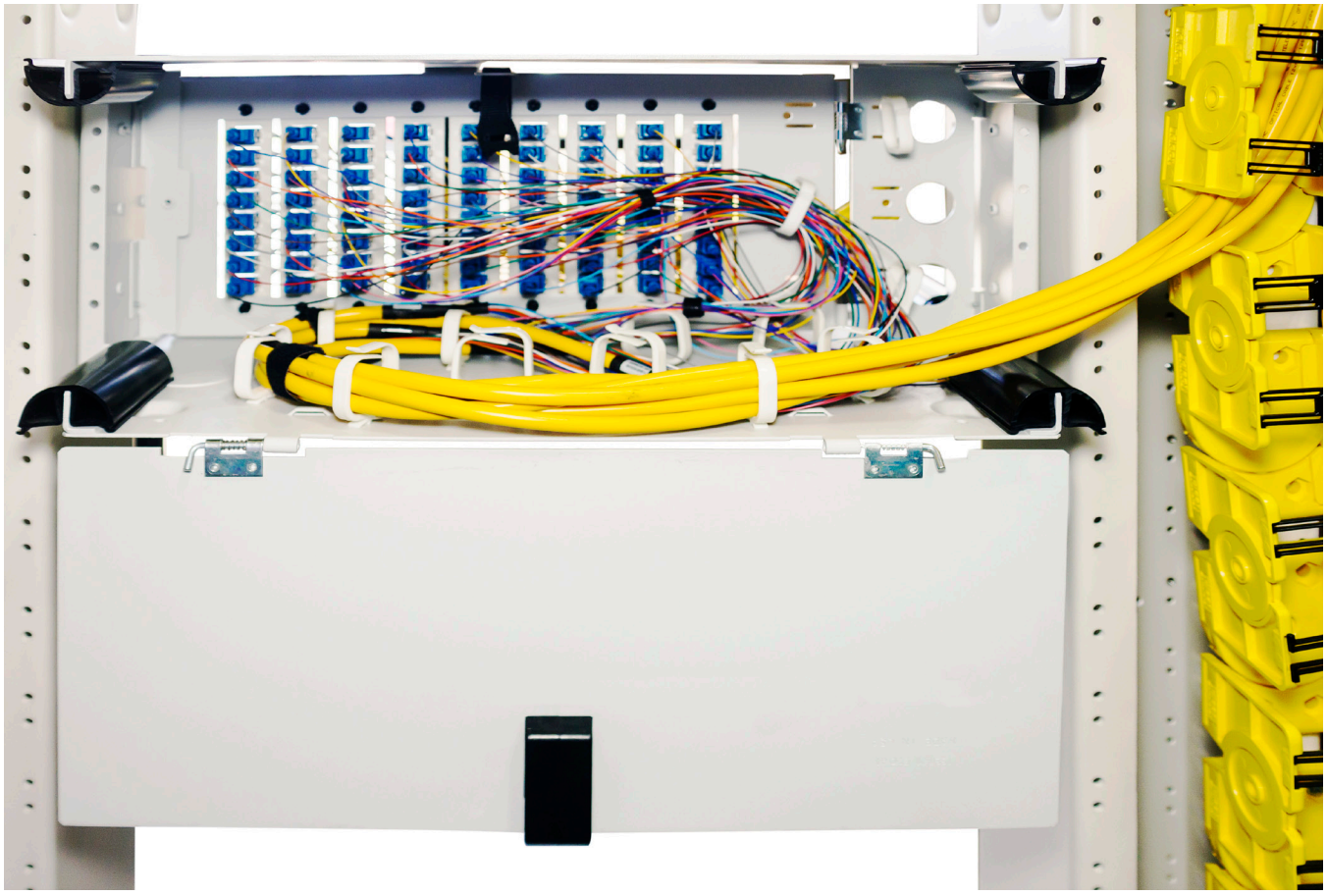
LCX-H competitive cross-reference/ordering guide

Angled Patch Plate, 24-Port, LC/UPC	No Direct Cross	**055-0000-5A210**	
Angled Patch Plate, 24-Port, LC/APC	No Direct Cross	**055-0000-5A290**	
Angled Patch Plate, 24-Port, LC/MM	No Direct Cross	**055-0000-2A412**	
Angled Patch Plate, 6-Port, SC/UPC	FL2-6PSMSC	**055-0000-6A10**	
Angled Patch Plate, 6-Port, SC Multimode	FL2-6PMMSC	**055-0000-6A20**	
Angled Patch Plate, 6-Port, SC/APC	FL2-6PSMASC	**055-0000-6A70**	
Angled Patch Plate, 8-Port, SC/UPC	No Direct Cross	**055-0000-6A80**	
Angled Patch Plate, 8-Port, SC Multimode	No Direct Cross	**055-0000-6A82**	
Angled Patch Plate, 8-Port, SC/APC	No Direct Cross	**055-0000-6A90**	
Angled Patch Plate, 12-Port, SC/UPC	No Direct Cross	**055-0000-6A210**	
Angled Patch Plate, 12-Port, SC/APC	No Direct Cross	**055-0000-6A270**	
Angled Patch Plate, 12-Port, SC/MM	No Direct Cross	**055-0000-6A220**	
Angled Patch Plate, 6-Port, MTP/MPO	No Direct Cross	**055-0000-MTA06**	
Angled Patch Plate, 8-Port, MTP/MPO	No Direct Cross	**055-0000-MTA08**	



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LCX-H competitive cross-reference/ordering guide

LCX Series Chassis Only

Description	Competitor Part Number	Telect Part Number	Quantity
LCX Patch/Splice Chassis 12-Fiber, 2 RU	No Direct Cross	**LCX-C2RU**	
LCX Patch/Splice Chassis 24-Fiber, 4 RU	No Direct Cross	**LCX-C4RU**	
LCX Patch/Splice Chassis 48-Fiber, 6 RU	No Direct Cross	**LCX-C6RU**	
LCX Patch/Splice Chassis 72/96-Fiber, 8 RU	No Direct Cross	**LCX-C8RU**	
LCX Splice Chassis 12-Fiber, 1 RU	LSX-100000	**LCX-M1RU**	
LCX Splice Chassis 24-Fiber, 2 RU	LSX-200000	**LCX-M2RU**	
LCX Splice Chassis 48-Fiber, 3 RU	LSX-300000	**LCX-M3RU**	
LCX Splice Chassis 72/96/144-Fiber, 4 RU	LSX-600000	**LCX-M4RU**	
LCX Splice Chassis 12-Fiber, 1 RU	LSX-SPLCA01	**LCX-S1RU**	
LCX Splice Chassis 24-Fiber, 2 RU	No Direct Cross	**LCX-S2RU**	
LCX Splice Chassis 48-Fiber, 3 RU	No Direct Cross	**LCX-S3RU**	
LCX Splice Chassis 72/96-Fiber, 4 RU	No Direct Cross	**LCX-S4RU**	
LCX Splice Chassis 144-Fiber, 4 RU	LSX-SPLCA06	**LCX-S141**	
LCX Splice Tray - 24-Fiber, ROHS	No Direct Cross	**LCX-S-HSF**	

Configured LCX Patch Only Panels

Description	Competitor Part Number	Part Number	Quantity
LCX-12 Patch, FC/APC, 19/23" Std. 1 RU	No Direct Cross	**LCX-P121D**	
LCX-12 Patch, FC/UPC, 19/23" Std. 1 RU	LSX-120000-12	**LCX-P121F**	
LCX-12 Patch, LC/APC,19/23" Std. 1 RU	No Direct Cross	**LCX-P121G**	
LCX-12 Patch, LC/UPC,19/23" Std. 1 RU	LSX-1K0000-12	**LCX-P121L**	
LCX-12 Patch, LC Multimode, 19/23" Std. 1 RU	No Direct Cross	**LCX-P121L-MM**	
LCX-12 Patch, SC/APC, 19/23" Std. 1 RU	LSX-1L0000-12	**LCX-P121N**	
LCX-12 Patch, SC/UPC, 19/23" Std. 1 RU	LSX-170000-12	**LCX-P121S**	
LCX-12 Patch, SC Multimode, 19/23" Std. 1 RU	LSX-1T0000-12	**LCX-P121S-MM**	
LCX-12 Patch, ST/UPC, 19/23" Std. 1 RU	No Direct Cross	**LCX-P121T**	
LCX-24 Patch, FC/APC, 19/23" Std. 2 RU	No Direct Cross	**LCX-P241D**	
LCX-24 Patch, FC/UPC, 19/23" Std. 2 RU	LSX-120000	**LCX-P241F**	
LCX-24 Patch, LC/APC,19/23" Std. 1 RU	LSX-1M0000	**LCX-P241G**	
LCX-24 Patch, LC/UPC,19/23" Std. 1 RU	LSX-1K0000	**LCX-P241L**	
LCX-24 Patch, LC Multimode, 19/23" Std. 1 RU	LSX-1C0000	**LCX-P241L-MM**	
LCX-24 Patch, SC/APC,19/23" Std. 2 RU	LSC-20PL	**LCX-P241N**	
LCX-24 Patch, SC/UPC,19/23" Std. 2 RU	LSX-24P7	**LCX-P241S**	
LCX-24 Patch, SC Multimode, 19/23" Std. 2 RU	LSX-24P9	**LCX-P241S-MM**	
LCX-24 Patch, ST/UPC, 19/23" Std. 2 RU	No Direct Cross	**LCX-P241T**	
LCX-48 Patch, FC/APC, 19/23" Std. 3 RU	No Direct Cross	**LCX-P481D**	
LCX-48 Patch, FC/UPC, 19/23" Std. 3 RU	LSX-220000	**LCX-P481F**	
LCX-48 Patch, LC/APC, 19/23" Std. 2 RU	LSX-2M0000	**LCX-P481G**	
LCX-48 Patch, LC/UPC, 19/23" Std. 2 RU	LSX-2K0000	**LCX-P481L**	
LCX-48 Patch, LC Multimode, 19/23" Std. 2 RU	LSX-2C0000	**LCX-P481L-MM**	
LCX-48 Patch, SC/APC, 19/23" Std. 3 RU	LSX-2L0000	**LCX-P481N**	
LCX-48 Patch, SC/UPC, 19/23" Std. 3 RU	LSX-270000	**LCX-P481S**	
LCX-48 Patch, SC Multimode, 19/23" Std. 3 RU	LSX-2T0000	**LCX-P481S-MM**	
LCX-48 Patch, ST/UPC, 19/23" Std. 3 RU	No Direct Cross	**LCX-P481T**	
LCX-72 Patch, FC/APC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P721D**	

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LCX-H competitive cross-reference/ordering guide

LCX-72 Patch, FC/UPC, 19/23" Std. 4 RU	LSX-620000	**LCX-P721F**	
LCX-72 Patch, LC/APC, 19/23" Std. 3 RU	LSX-6M0000	**LCX-P721G**	
LCX-72 Patch, LC/UPC, 19/23" Std. 3 RU	LSX-6K0000	**LCX-P721L**	
LCX-72 Patch, LC Multimode, 19/23" Std. 3 RU	LSX-6C0000	**LCX-P721L-MM**	
LCX-72 Patch, SC/APC, 19/23" Std. 4 RU	LSX-6L0000	**LCX-P721N**	
LCX-72 Patch, SC/UPC, 19/23" Std. 4 RU	LSX-670000	**LCX-P721S**	
LCX-72 Patch, SC Multimode, 19/23" Std. 4 RU	LSX-6T0000	**LCX-P721S-MM**	
LCX-72 Patch, ST/UPC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P721T**	
LCX-96 Patch, FC/APC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P961D**	
LCX-96 Patch, FC/UPC, 19/23" Std. 4 RU	LSX-720000	**LCX-P961F**	
LCX-96 Patch, LC/APC, 19/23" Std. 3 RU	LSX-7M0000	**LCX-P961G**	
LCX-96 Patch, LC/UPC, 19/23" Std. 3 RU	LSX-7K0000	**LCX-P961L**	
LCX-96 Patch, LC Multimode, 19/23" Std. 3 RU	LSX-7C0000	**LCX-P961L-MM**	
LCX-96 Patch, SC/APC, 19/23" Std. 4 RU	LSX-7L0000	**LCX-P961N**	
LCX-96 Patch, SC/UPC, 19/23" Std. 4 RU	LSX-770000	**LCX-P961S**	
LCX-96 Patch, SC Multimode, 19/23" Std. 4 RU	LSX-7T0000	**LCX-P961S-MM**	
LCX-96 Patch, ST/UPC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P961T**	
LCX-144 Patch, FC/APC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P141D**	
LCX-144 Patch, FC/UPC, 19/23" Std. 4 RU	LSX-T20000	**LCX-P141F**	
LCX-144 Patch, LC/APC, 19/23" Std. 4 RU	LSX-TM0000	**LCX-P141G**	
LCX-144 Patch, LC/UPC, 19/23" Std. 4 RU	LSX-TK0000	**LCX-P141L**	
LCX-144 Patch, LC Multimode, 19/23" Std. 4 RU	LSX-TC0000	**LCX-P141L-MM**	
LCX-144 Patch, SC/APC, 19/23" Std. 4 RU	LSX-TL0000	**LCX-P141N**	
LCX-144 Patch, SC/UPC, 19/23" Std. 4 RU	LSX-T70000	**LCX-P141S**	
LCX-144 Patch, SC Multimode, 19/23" Std. 4 RU	LSX-TT0000	**LCX-P141S-MM**	
LCX-144 Patch, ST/UPC, 19/23" Std. 4 RU	No Direct Cross	**LCX-P141T**	

Configured LCX Splice Only Panels

Description	**Competitor Part Number**	Part Number	**Quantity**
LCX-24 Fiber/Splice 19/23" Std. 2 RU	No Direct Cross	**LCX-S241**	
LCX-48 Fiber/Splice 19/23" Std. 3 RU	No Direct Cross	**LCX-S481**	
LCX-96 Fiber/Splice 19/23" Std. 4 RU	No Direct Cross	**LCX-S961**	

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LCX cross-reference/ordering guide

Configured LCX Combo Patch & Splice Panels

Description	Competitor Part Number	Part Number	Quantity
LCX-12 Splice/Patch, FC/APC, 19/23" Std. 2 RU	No Direct Cross	**LCX-C121D**	
LCX-12 Splice/Patch, FC/UPC, 19/23" Std. 2 RU	LSX-121012-A-SPL	**LCX-C121F**	
LCX-12 Splice/Patch, LC/APC, 19/23" Std. 2 RU	No Direct Cross	**LCX-C121G**	
LCX-12 Splice/Patch, LC/UPC, 19/23" Std. 2 RU	No Direct Cross	**LCX-C121L**	
LCX-12 Splice/Patch, LC Multimode, 19/23" Std. 2 RU	No Direct Cross	**LCX-C121L-MM**	
LCX-12 Splice/Patch, SC/APC, 19/23" Std. 2 RU	LSX-1L1012-A-SPL	**LCX-C121N**	
LCX-12 Splice/Patch, SC/UPC, 19/23" Std. 2 RU	LSX-171012-A-SPL	**LCX-C121S**	
LCX-12 Splice/Patch, SC Multimode, 19/23" Std. 2 RU	LSX-1T1012-A-SPL	**LCX-C121S-MM**	
LCX-12 Splice/Patch, ST/UPC, 19/23" Std. 2 RU	No Direct Cross	**LCX-C121T**	
LCX-24 Splice/Patch, FC/APC, 19/23" Std. 4 RU	No Direct Cross	**LCX-C241D**	
LCX-24 Splice/Patch, FC/UPC, 19/23" Std. 4 RU	LSX-121022-A-SPL	**LCX-C241F**	
LCX-24 Splice/Patch, LC/APC, 19/23" Std. 3 RU	No Direct Cross	**LCX-C241G**	
LCX-24 Splice/Patch, LC/UPC, 19/23" Std. 3 RU	No Direct Cross	**LCX-C241L**	
LCX-24 Splice/Patch, LC Multimode, 19/23" Std. 3 RU	No Direct Cross	**LCX-C241L-MM**	
LCX-24 Splice/Patch, SC/APC, 19/23" Std. 4 RU	LSX-1L1022-A-SPL	**LCX-C241N**	
LCX-24 Splice/Patch, SC/UPC, 19/23" Std. 4 RU	LSX-171022-A-SPL	**LCX-C241S**	
LCX-24 Splice/Patch, SC Multimode, 19/23" Std. 4 RU	LSX-1T1022-A-SPL	**LCX-C241S-MM**	
LCX-24 Splice/Patch, ST/UPC, 19/23" Std. 4 RU	No Direct Cross	**LCX-C241T**	
LCX-48 Splice/Patch, FC/APC, 19/23" Std. 6 RU	No Direct Cross	**LCX-C481D**	
LCX-48 Splice/Patch, FC/UPC, 19/23" Std. 6 RU	LSX-321042-A-SPL	**LCX-C481F**	
LCX-48 Splice/Patch, LC/APC, 19/23" Std. 5 RU	No Direct Cross	**LCX-C481G**	
LCX-48 Splice/Patch, LC/UPC, 19/23" Std., 5 RU	No Direct Cross	**LCX-C481L**	
LCX-48 Splice/Patch, LC Multimode, 19/23" Std. 5 RU	No Direct Cross	**LCX-C481L-MM**	
LCX-48 Splice/Patch, SC/APC, 19/23" Std. 6 RU	LSX-3L1042-A-SPL	**LCX-C481N**	
LCX-48 Splice/Patch, SC/UPC, 19/23" Std. 6 RU	LSX-371042-A-SPL	**LCX-C481S**	
LCX-48 Splice/Patch, SC Multimode, 19/23" Std. 6 RU	LSX-3T1042-A-SPL	**LCX-C481S-MM**	
LCX-48 Splice/Patch, SC/UPC, 19/23" Std. 6 RU 3M PIGTAIL	No Direct Cross	**LCX-C481S-3M**	
LCX-48 Splice/Patch, ST/UPC, 19/23" Std. 6 RU	No Direct Cross	**LCX-C481T**	
LCX-72 Splice/Patch, FC/APC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C721D**	
LCX-72 Splice/Patch, FC/UPC, 19/23" Std. 8 RU	LSX-621062-A-SPL	**LCX-C721F**	
LCX-72 Splice/Patch, LC/APC, 19/23" Std. 7 RU	No Direct Cross	**LCX-C721G**	
LCX-72 Splice/Patch, LC/UPC, 19/23" Std., 7 RU	No Direct Cross	**LCX-C721L**	
LCX-72 Splice/Patch, LC Multimode, 19/23" Std. 7 RU	No Direct Cross	**LCX-C721L-MM**	
LCX-72 Splice/Patch, SC/APC, 19/23" Std. 8 RU	LSX-6L1062-A-SPL	**LCX-C721N**	
LCX-72 Splice/Patch, SC/UPC, 19/23" Std. 8 RU	LSX-671062-A-SPL	**LCX-C721S**	
LCX-72 Splice/Patch, SC Multimode, 19/23" Std. 8 RU	LSX-6T1062-A-SPL	**LCX-C721S-MM**	
LCX-72 Splice/Patch, ST/UPC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C721T**	
LCX-96 Splice/Patch, FC/APC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C961D**	
LCX-96 Splice/Patch, FC/UPC, 19/23" Std. 8 RU	LSX-721082-A-SPL	**LCX-C961F**	
LCX-96 Splice/Patch, LC/APC, 19/23" Std. 7 RU	No Direct Cross	**LCX-C961G**	
LCX-96 Splice/Patch, LC/UPC, 19/23" Std., 7 RU	No Direct Cross	**LCX-C961L**	
LCX-96 Splice/Patch, LC Multimode, 19/23" Std. 7 RU	No Direct Cross	**LCX-C961L-MM**	
LCX-96 Splice/Patch, SC/APC, 19/23" Std. 8 RU	LSX-7L1082-A-SPL	**LCX-C961N**	
LCX-96 Splice/Patch, SC/UPC, 19/23" Std. 8 RU	LSX-771082-A-SPL	**LCX-C961S**	
LCX-96 Splice/Patch, SC Multimode, 19/23" Std. 8 RU	LSX-7T1082-A-SPL	**LCX-C961S-MM**	

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LCX-96 Splice/Patch, ST/UPC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C961T**	
LCX-144 Splice/Patch, FC/APC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C141D**	
LCX-144 Splice/Patch, C/UPC, 19/23" Std. 8 RU	LSX-T21122-A-SPL	**LCX-C141F**	
LCX-144 Splice/Patch, LC/APC,19/23" Std. 8 RU	LSX-TM1122-A-SPL	**LCX-C141G**	
LCX-144 Splice/Patch, LC/UPC,19/23" Std. 8 RU	LSX-TK1122-A-SPL	**LCX-C141L**	
LCX-144 Splice/Patch, LC Multimode, 19/23" Std. 8RU	LSX-TC1122-A-SPL	**LCX-C141L-MM**	
LCX-144 Splice/Patch, SC/APC, 19/23" Std. 8 RU	LSX-TL1122-A-SPL	**LCX-C141N**	
LCX-144 Splice/Patch, SC/UPC, 19/23" Std. 8 RU	LSX-T71122-A-SPL	**LCX-C141S**	
LCX-144 Splice/Patch, SC Multimode, 19/23" Std. 8 RU	LSX-TT1122-A-SPL	**LCX-C141S-MM**	
LCX-144 Splice/Patch, ST/UPC, 19/23" Std. 8 RU	No Direct Cross	**LCX-C141T**	

LCX Standard Adapter Plates

Description	Competitor Part Number	Part Number	Quantity
Patch Plate, 6-Port, FC/UPC	LSX-6PSMFC	**055-0000-2010**	
Patch Plate, 6-Port, FC/APC	No Direct Cross	**055-0000-2070**	
Patch Plate, 8-Port, FC/UPC	LSX-8P2	**055-0000-2080**	
Patch Plate, 8-Port, FC/APC	LSX-8PSMAFC	**055-0000-2090**	
Patch Plate, 6-Port, ST/UPC	LSX-6PSMST	**055-0000-3010**	
Patch Plate, 6-Port, ST Multimode	LSX-6PMMST	**055-0000-3020**	
Patch Plate, 8-Port, ST/UPC	No Direct Cross	**055-0000-3080**	
Patch Plate, 12-Port, LC/UPC	LSX-12PK	**055-0000-5010**	
Patch Plate, 12-Port, LC Multimode	LSX-12PM	**055-0000-5012**	
Patch Plate, 12-Port, LC/APC	LSX-12PC	**055-0000-5090**	
Patch Plate, 6-Port, SC/UPC	LSX-6PSMSC	**055-0000-6010**	
Patch Plate, 6-Port, SC Multimode	LSX-6PMMSC	**055-0000-6020**	
Patch Plate, 6-Port, SC/APC	LSX-6PSMASC	**055-0000-6070**	
Patch Plate, 8-Port, SC/UPC	LSX-8P7	**055-0000-6080**	
Patch Plate, 8-Port, SC Multimode	LSX-8PT	**055-0000-6082**	
Patch Plate, 8-Port, SC/APC	LSX-8PL	**055-0000-6090**	
Patch Plate, Blank	No Direct Cross	**055-0000-9000**	

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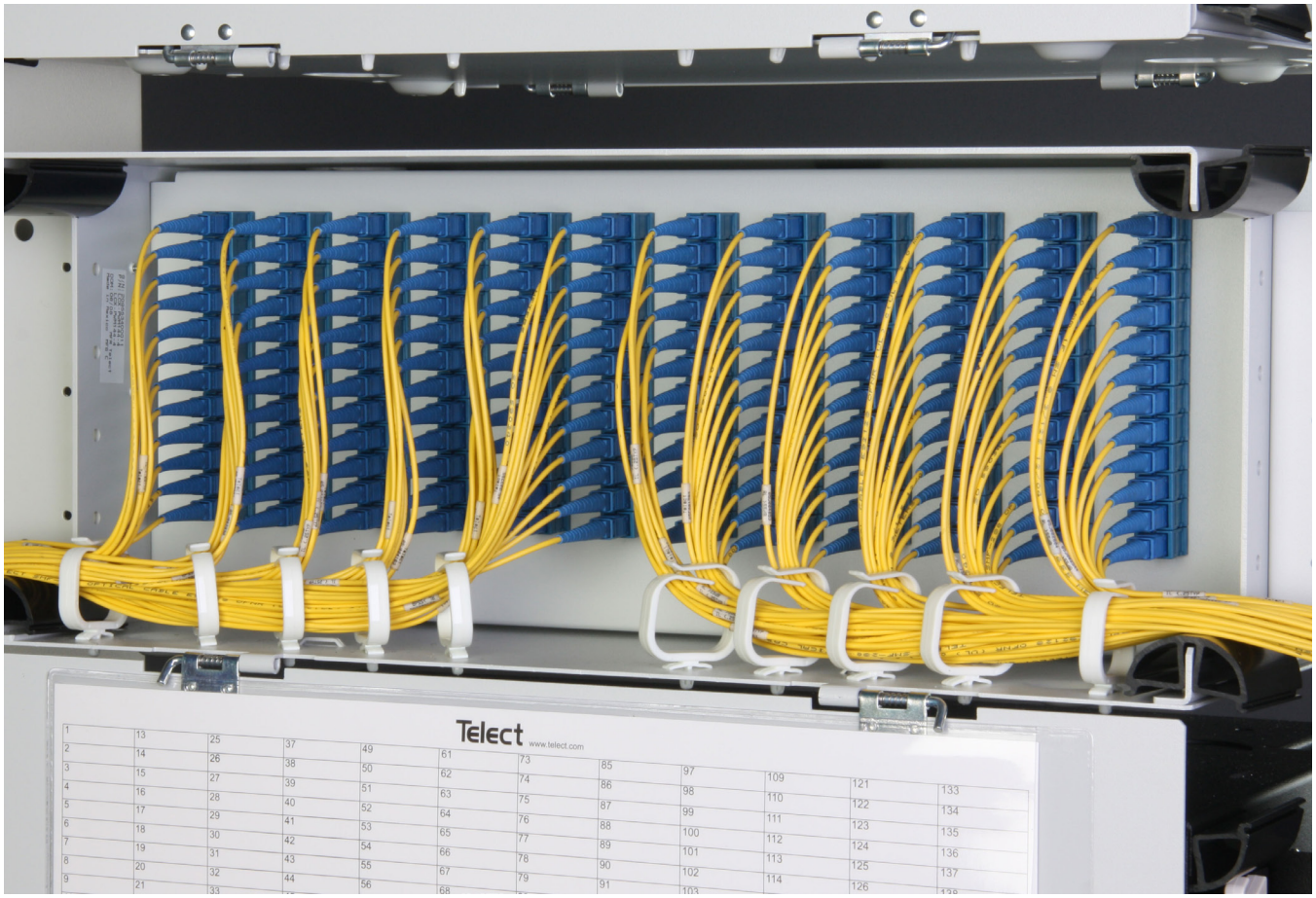
Bulkhead Style Optical Panels

Telect LCX Series installation guide



Applies to : LCX Series

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1. LCX Fiber Panels

1.1 General Information

Telect manufactures LCX Fiber Splice Panels and LCX Fiber Patch Panels of various densities to suit network fiber splice, patching, and routing requirements.

- 2 RU through 4 RU models vary in density from 24 to 144 fiber terminations. All have spring-hinged removable front and rear doors, as shown in the following illustration. Knock-out holes at the top and bottom of the panel allow for routing from splice panels to patch panels (and between patch panels) vertically within the rack. Hole pattern and positions are compatible with panels offered by other manufacturers, allowing expansion and replacement of those systems using Telect's low-cost LCX panels.
- Interconnection and cross-connection cabling from above or below enter at the two front corners of each Telect LCX panel via isolation hooks and/or radius control arcs (sold seperately) installed on-site to suit the application and entry/exit direction. Eight split arcs and 24 snap-in cable rings are standard with each panel. Telect also offers optional kits (KIT-CMHOOK, KIT-CMRHOOK, KIT-CMARK) to satisfy cable management practices requiring multiple arcs or guide posts to separate and isolate groups of fiber cables.

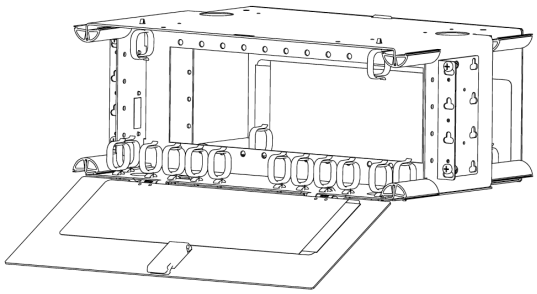

Figure 1 - LCX Fiber Panels (Common Physical Features of 2 RU — 4 RU Panels)

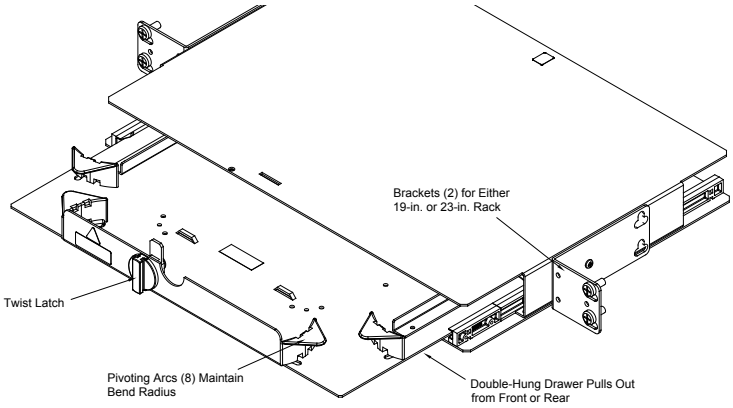

Figure 2 - LCX 1 RU Fiber Panel

1 RU models have densities up to 24 fiber terminations. Instead of front and rear doors, 1 RUs have a removable sliding drawer that can be extended at the front or rear of the chassis to maximize access to fiber connections. Pivoting arcs at corner entries and exits provide cable management. Entry and exit positions are compatible with entries and exits of other Telect LCX panels and those of other manufacturers.

1.1.1 LCX Fiber Splice Panels

Telect offers four sizes of LCX Fiber Splice Panels (1 RU through 4 RU) to accommodate up to 144 splices. Each removable splice tray (LCX-S-HSF) holds up to 24 splices along with 1½ m of fiber cable storage:

- For a 1 RU splice tray, all fiber (subunit, cable, and strands) is stored on the tray.
- For a 2 RU, 3 RU or 4 RU splice tray, all subunit and interconnection cable storage is below the trays.

Trays easily slip free of the panels to allow splicing. Storage spools or arcs, along with splice holders, are mounted directly on the tray, eliminating the need for special splice cassettes.

1.1.1.1 LCX 1RU Fiber Splice Trays - 24-Splice Capability

LCX 1 RU Fiber Splice Trays use sets of pivoting arcs for routing and storing both fiber subunits and interconnection cable.

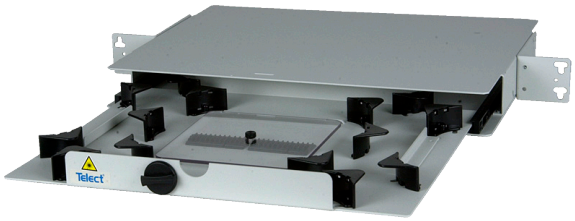

Figure 3 - 1 RU Fiber Splice Tray

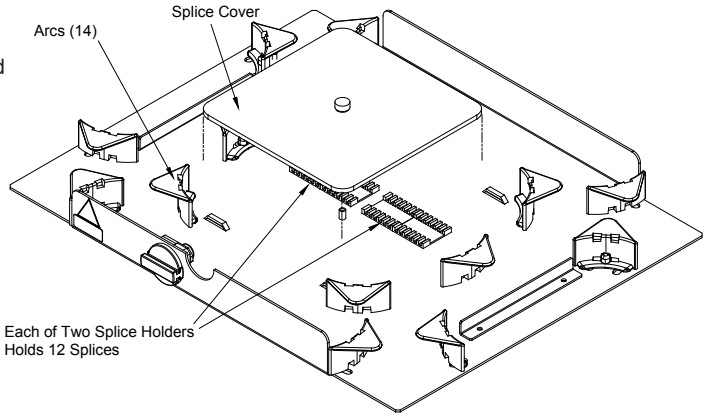

Figure 4 - 1 RU Splice Tray (Right Corner Tray)

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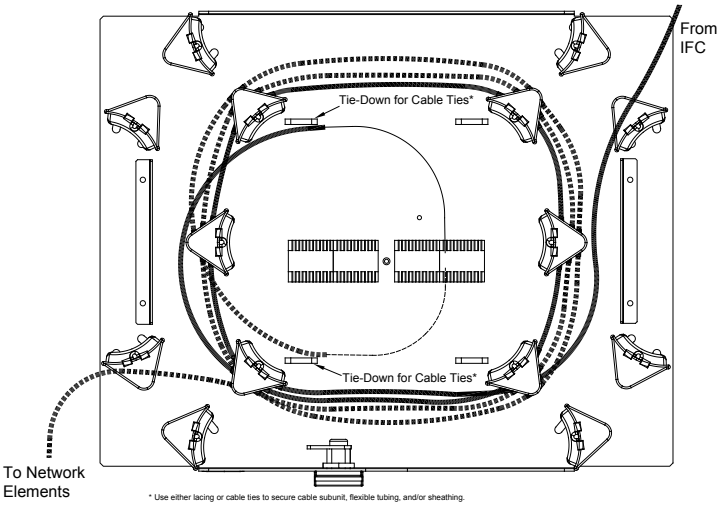
From IFC
Tie-Down for Cable Ties*
Tie-Down for Cable Ties*
To Network Elements
* Use either lacing or cable ties to secure cable subunit, flexible tubing, and/or sheathing.

Figure 5 - 1 RU Splice Tray - Fiber Routing

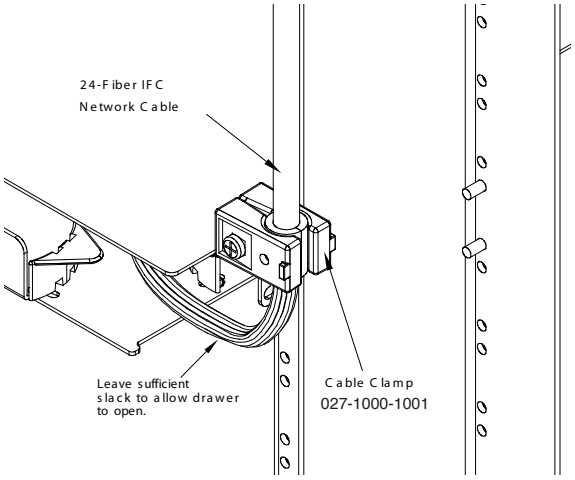

Figure 6 - 1 RU Cable Clamp Fits 12 to 24 Fiber IFC

IFC stranded cable from the splice vault is secured at either rear corner of the LCX Splice Panel by an optional cable clamp. (A single clamp comes with two Rubber bushings to fit either a 12- or 24-fiber IFC riser/plenum cable.) The following illustration shows a clamp holding an IFC cable installed on the rear rack flange near the entry/exit of an LCX 1 RU Splice Panel. The interconnection cables enter the tray at one of the other corners of the splice tray.

1.1.1.2 LCX 2 RU, 3 RU, & 4 RU Fiber Splice Trays

The following Figures show termination capacities of LCX 2 RU, 3 RU,and 4 RU Fiber Splice Panels. A 144-splice, 4 RU LCX panel, (LCX-S141) accommodating 6 splice trays is available but not pictured.

- 24-splice, 2 RU LCX panel accommodates 1 splice tray
- 48-splice, 3 RU LCX panel accommodates 2 splice trays
- 72-splice, 4 RU LCX panel accommodates 3 splice trays
- 96-splice, 4 RU LCX panel accommodates 4 splice trays

2 RU, 3 RU, and 4 RU Fiber Splice Trays use storage spools to route and store stranded fiber.

Figure 7 - LCX Splice Panel, 2 RU — 24 Termination Capacity

Figure 8 - LCX Splice Panel, 3 RU — 48 Termination Capacity

Figure 9 - LCX Splice Panel, 4 RU — 72 to 96 Termination Capacity

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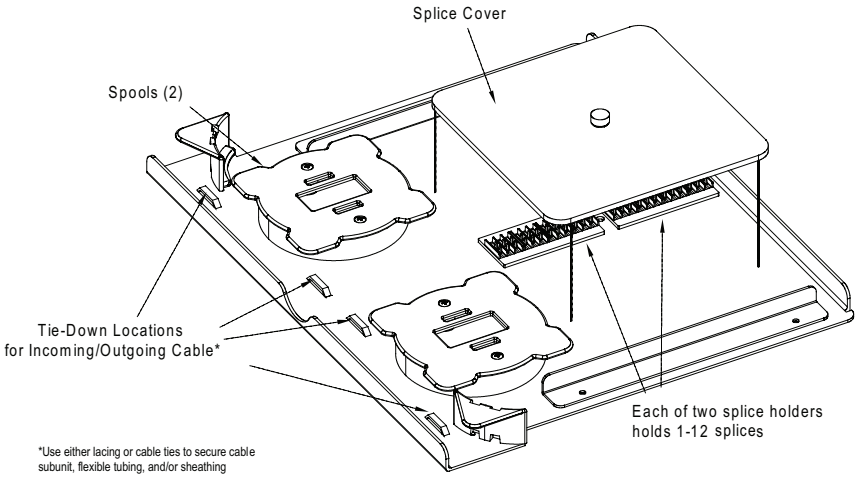

Figure 10 - Splice Tray (Right Corner View)

IFC stranded cable from the splice vault is secured at either rear corner of the LCX Splice Panel by an optional cable clamp. (A single clamp, KIT-CLMP fits all sizes of IFC riser and plenum cable.) Figure 13 on the following page shows a clamp holding a 96-strand IFC cable installed at the left rear corner of an LCX Splice Panel. Cable rings in the rear portion of the panel lead the IFC tubes to one of the front corners of the splice trays. The interconnection cables enter the tray at the other front corner of the 2 RU/3 RU/4 RU splice tray.

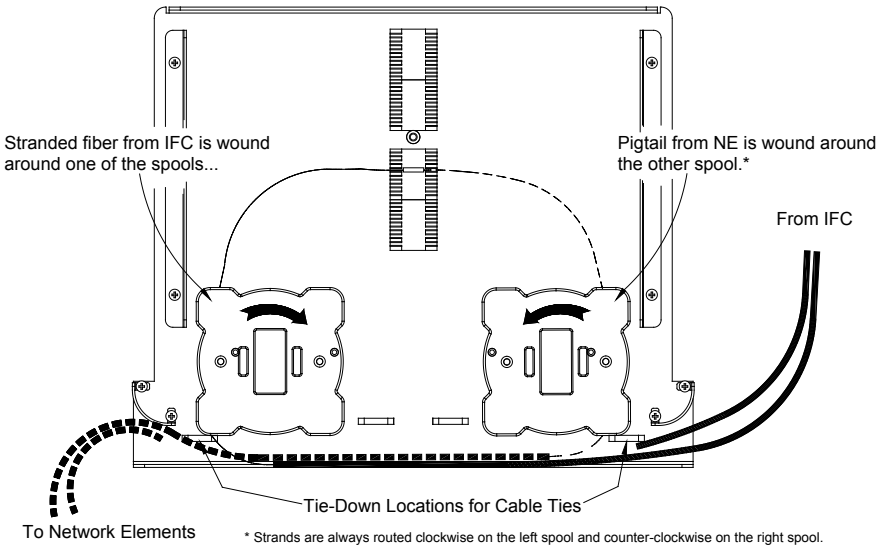
Stranded fiber from IFC is wound
around one of the spools...
Pigtail from NE is wound around
the other spool.*
From IFC
Tie-Down Locations for Cable Ties
To Network Elements
* Strands are always routed clockwise on the left spool and counter-clockwise on the right spool.

Figure 11 - Splice Tray (Fiber Routing)

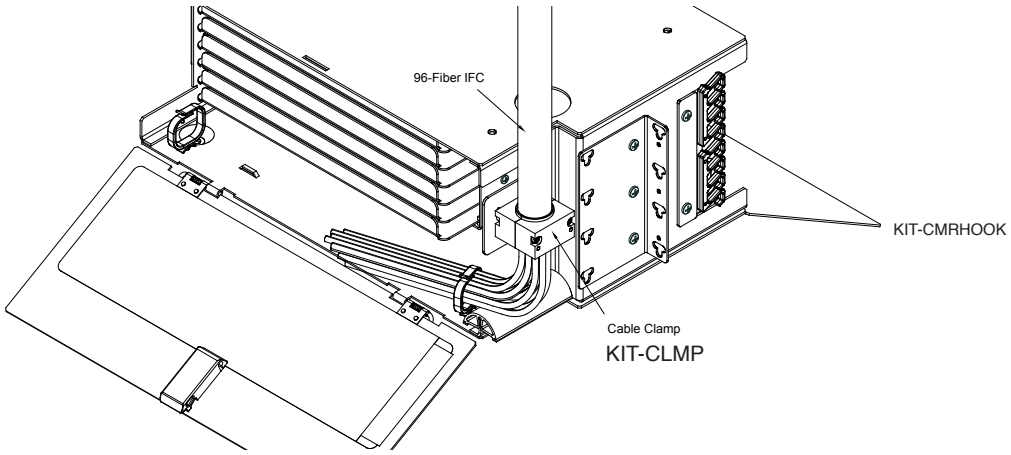

Figure 12 - Optional Cable Clamp Fits All Sizes of IFC

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1.1.2 LCX Fiber Patch Panels

LCX Fiber Patch Panels come in six termination capacities and can be loaded with various patch plates. Refer to Figures 13 - 16.

In addition to patch panels with or without installed patch plates, Telect offers a special factory-configured 4 RU patch panel with 144 discrete SC adapters.

All panels can accommodate SC/UPC, SC/APC, FC/UPC, FC/APC, LC/UPC, or ST/UPC patch plates. Patch plates simply snap into the chassis' bulkhead.:

- SC/UPC, SC/APC, FC/UPC, FC/APC, ST/UPC, LC/APC and MPO are available in patch plates with 6 or 8 adapters
- LC/SC is available in patch plates with 12 adapters
- LC/UPC and LC/APC are available in patch plates with 24 adapters
- MTP/MPO feed through patch plates are available with 6 and 8 adapters

All adapters also offered in multimode versions. All adapters include dust covers. Like the chassis, most patch plates are available in white or black. Refer to Figure 17.

Figure 13 - LCX Patch Panel, 1 RU — 24 Termination SC
24 Termination LC

Figure 14 - LCX Patch Panel, 2 RU — 24 Termination

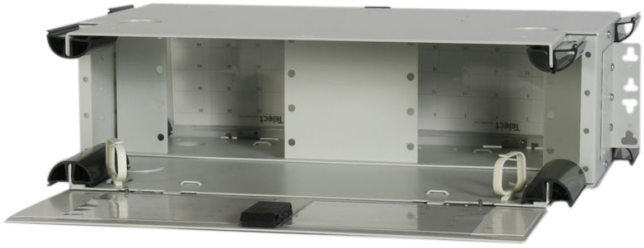


Figure 15 - LCX Patch Panel, 3 RU — 48 Termination

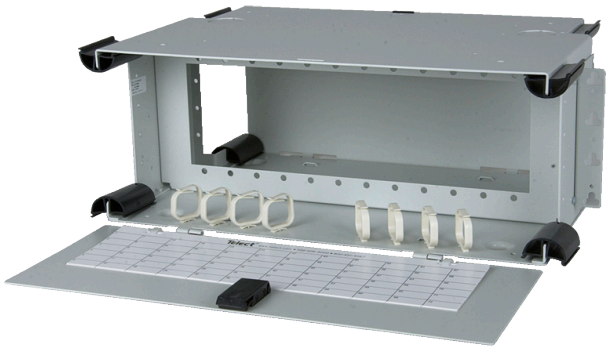
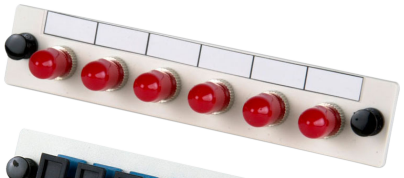
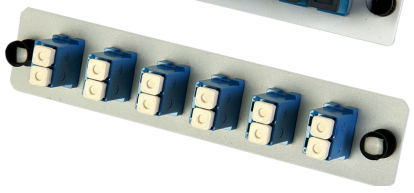


Figure 16 - LCX Patch Panel, 4 RU — 72, 96, or 144 Termination

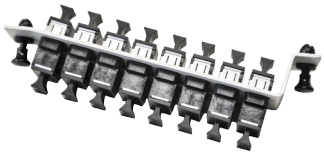


6-Adapter Patch Plate
(SC, FC, ST)

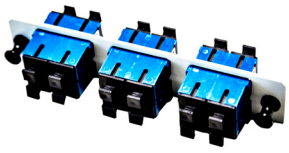
8-Adapter Patch Plate
(SC, FC, ST)



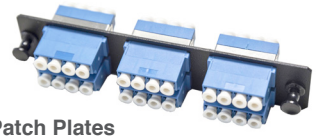
12-Adapter Patch Plate
(LC Only)



8-Adapter Patch Plate
(MPO)



12-Adapter Patch Plate
(SC duplex)



24-Adapter Patch Plate
(LC quad)

Figure 17 - Patch Plates

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1.1.3 Angled and Standard Adapter Plates

Angled Adapter Plates	6-port	8-port	12-port	16-port	24-port
SC/UPC	055-0000-6A10	055-0000-6A80	055-0000-6A210		
SC/APC	055-0000-6A70	055-0000-6A90	055-0000-6A270		
LC/UPC			055-0000-5A10	055-0000-5A11	055-0000-5A210
LC/APC			055-0000-5A90	055-0000-5A91	055-0000-5A290
FC/UPC	055-0000-2A10	055-0000-2A80			
FC/APC	055-0000-2A70	055-0000-2A90			
ST/UPC	055-0000-3A10	055-0000-3A80			
MTP/MPO	055-0000-MTA06	055-0000-MTA08			
SC MM	055-0000-6A20	055-0000-6A82	055-0000-6A22		
LC MM			055-0000-5A12	055-0000-5A13	055-0000-2A412

Blank adapter plate: 055-0000-9000; Add -BLK for black adapter plates

Note :: *All standard and angled adapter plates are LGX® compatible and fit in:*

Telect LCX and LCX-H, Corning LDC®, TE/ADC LSX®
Leviton LightSpace®, OFS LGX®
AFL WME, XFM®, and LS Series Patch Panels
Any other LGX® Compatible Panel

Figure 18 - Angled Adapter Plate

Standard Adaptor Plates	Part Number
Patch Plate, 6-Port, FC/UPC	**055-0000-2010**
Patch Plate, 6-Port, FC/APC	**055-0000-2070**
Patch Plate, 8-Port, FC/UPC	**055-0000-2080**
Patch Plate, 8-Port, FC/APC	**055-0000-2090**
Patch Plate, 6-Port, ST/UPC	**055-0000-3010**
Patch Plate, 6-Port, ST Multimode	**055-0000-3020**
Patch Plate, 8-Port, ST/UPC	**055-0000-3080**
Patch Plate, 12-Port, LC/UPC	**055-0000-5010**
Patch Plate, 12-Port, LC Multimode	**055-0000-5012**
Patch Plate, 12-Port, LC/APC	**055-0000-5090**
Patch Plate, 6-Port, SC/UPC	**055-0000-6010**
Patch Plate, 6-Port, SC Multimode	**055-0000-6020**
Patch Plate, 6-Port, SC/APC	**055-0000-6070**
Patch Plate, 8-Port, SC/UPC	**055-0000-6080**
Patch Plate, 8-Port, SC Multimode	**055-0000-6082**
Patch Plate, 8-Port, SC/APC	**055-0000-6090**
Patch Plate, Blank	**055-0000-9000**

1.2 Special Function Modules

Empty LCX Fiber Patch Panels can be configured on-site with adapter packs and special function modules.

Telect offers a full line of standard-size Wavelength Division Multiplexing (WDM) modules and splitter modules that can be used in place of adapter packs. Some special-function Telect modules are illustrated below. Call Telect at 1-509-926-6000. See Telect.com for detailed information.

1.2.1 MTP Breakout Modules

Telect offers both MTP and MPO cassettes that are LGX compatible. Please call for more information.

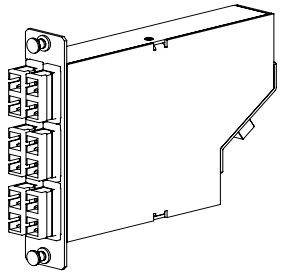

Figure 20 - MTP Breakout Module

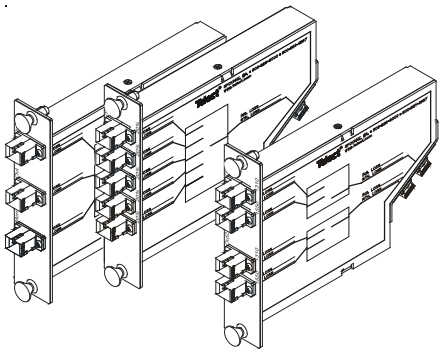

Figure 19 - WDM & Splitter Modules

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1.3 Drawings

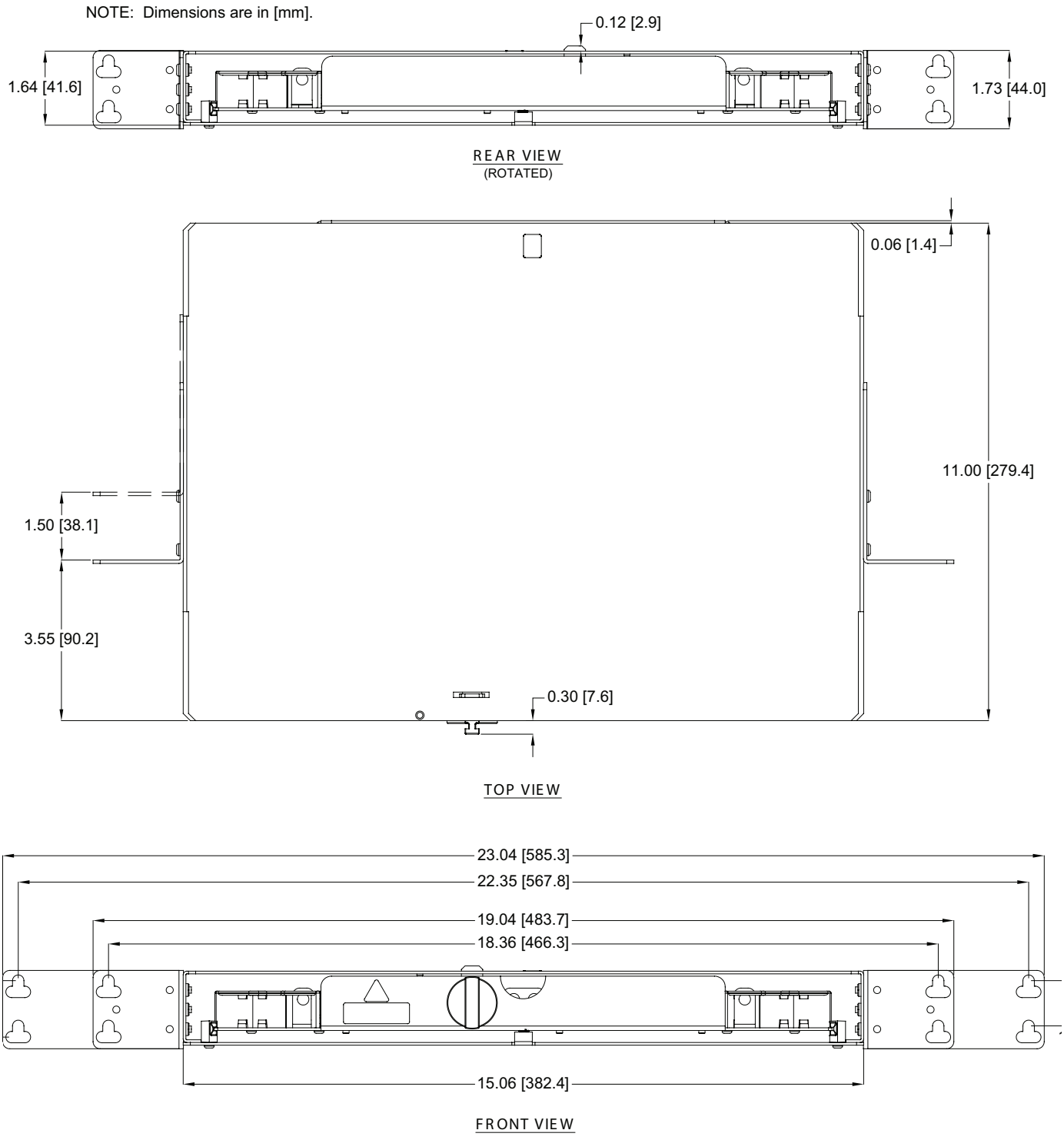

Figure 21 - 1 RU LCX Chassis

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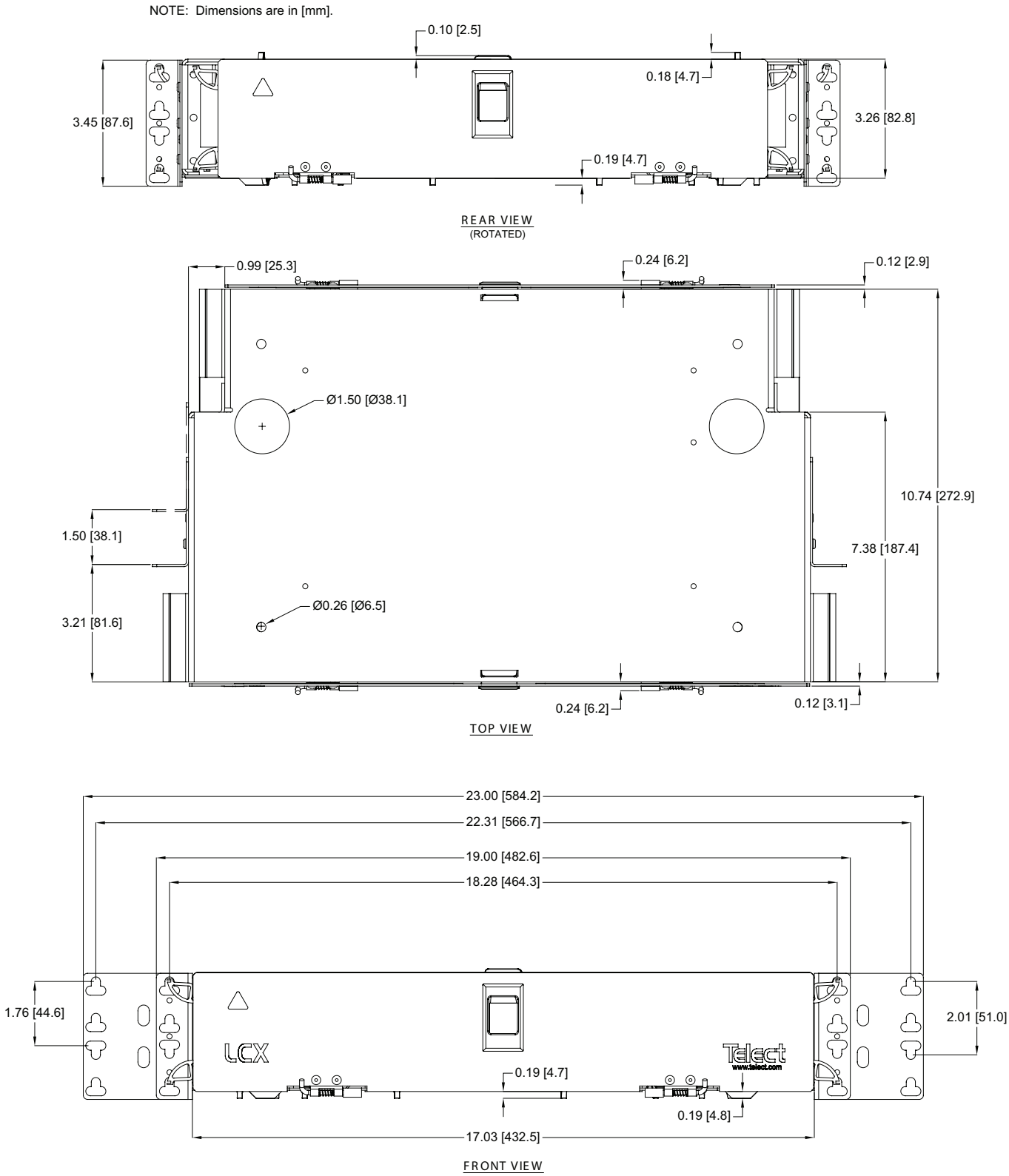

Figure 22 - 2 RU LCX Chassis

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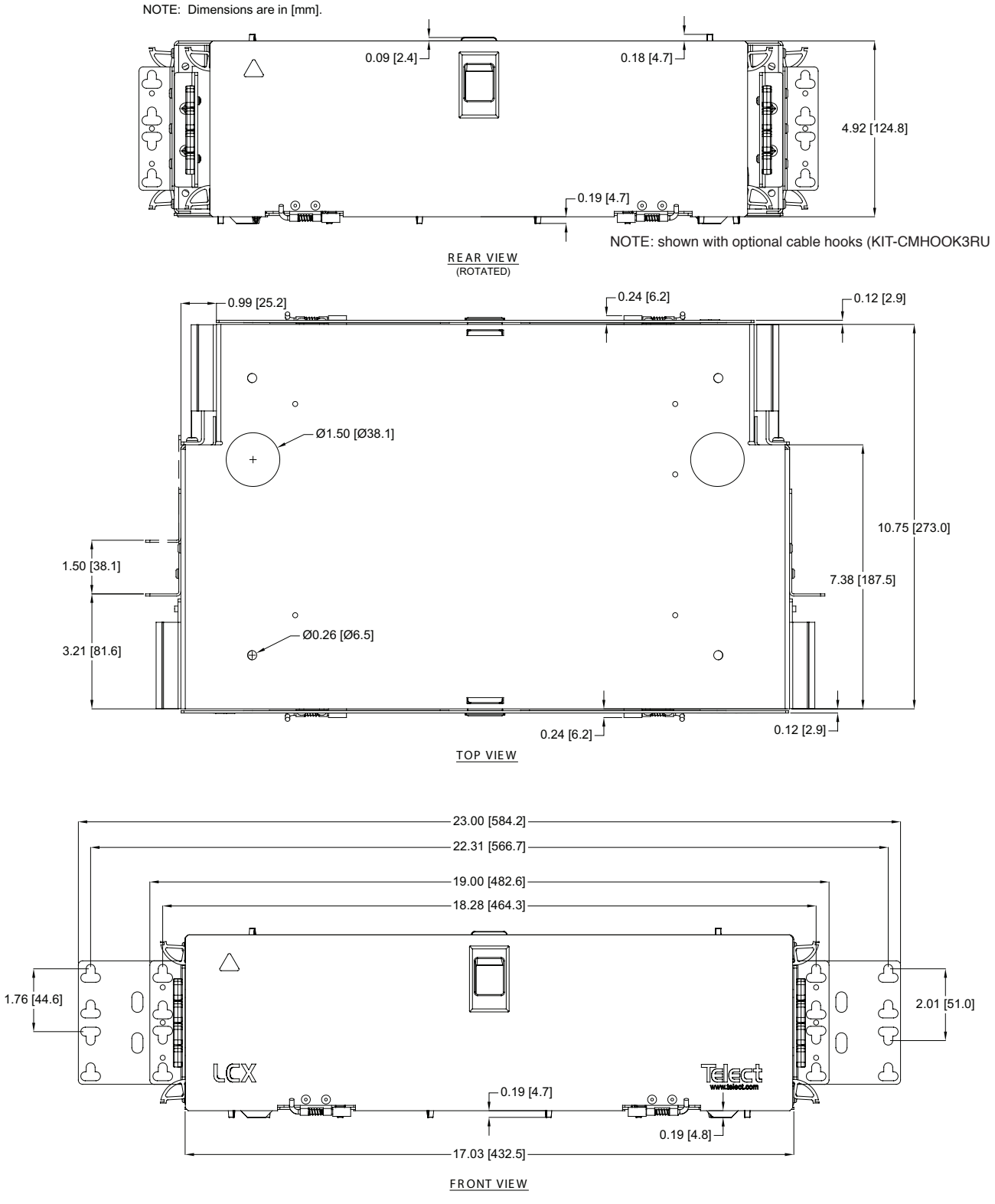

Figure 23 - 3 RU LCX Chassis

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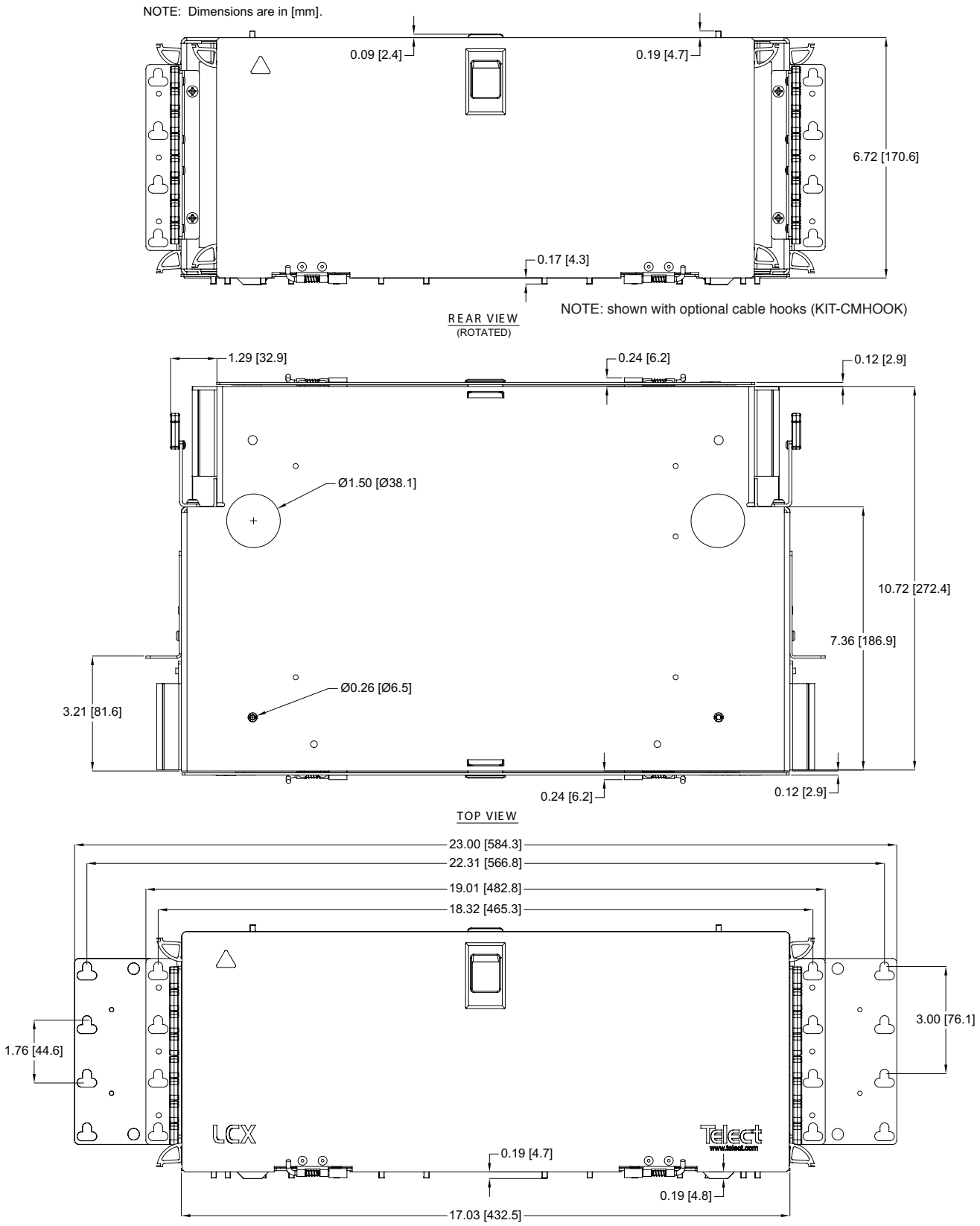

Figure 24 - 4 RU LCX Chassis

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NOTE: shown with optional cable hooks sold separately (KIT-CMHOOK)

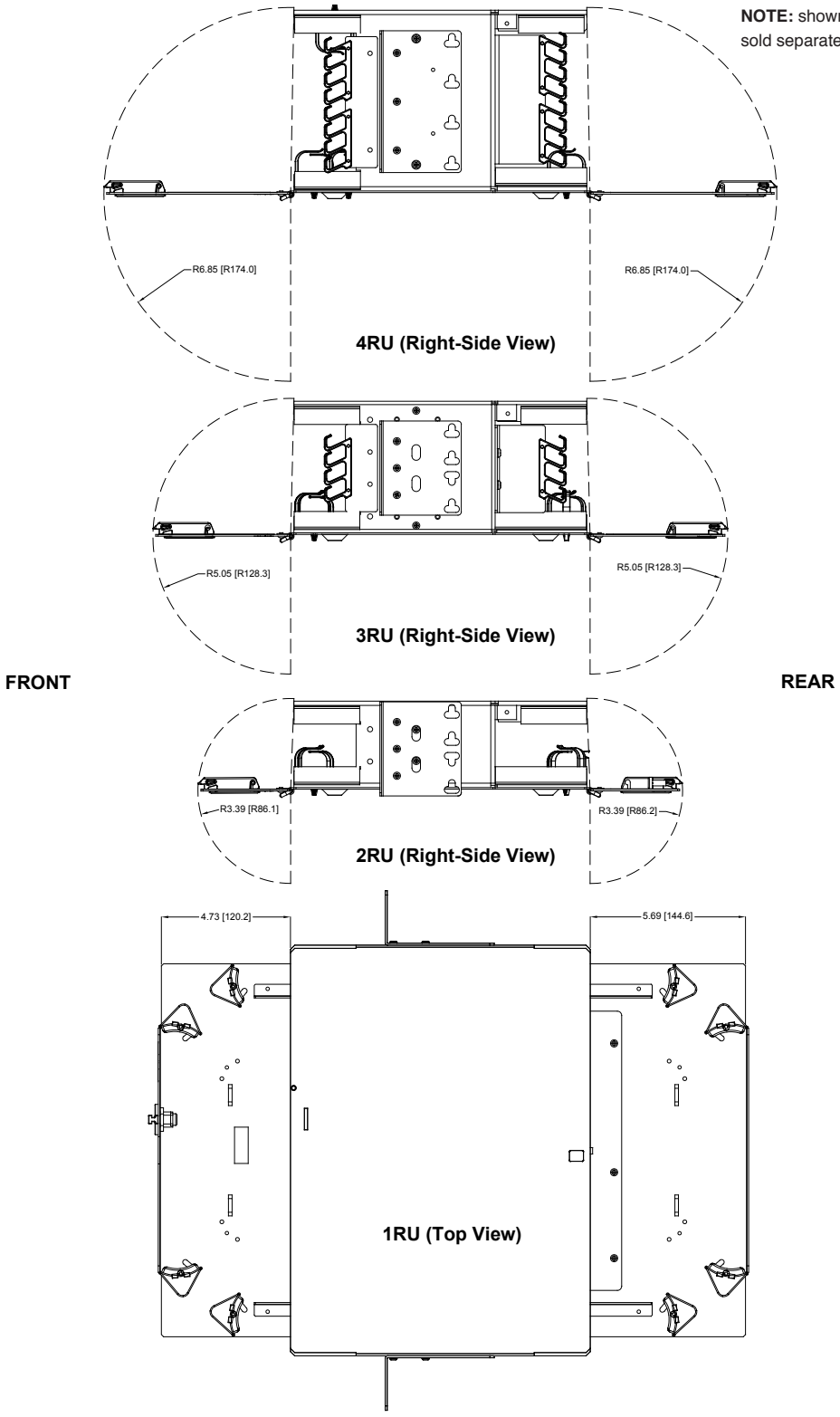

Figure 25 - Pull-Out & Swing-Out Clearances

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2. Applications

2.1 Interconnecting IFC to Network Elements

Figure 26 shows a simple interconnection scheme where OSP is spliced at a vault to IFC plenum or a riser cable, which is then spliced at a LCX Fiber Splice Panel to the network elements.

NOTE: Stranded or ribbon fiber should always enter or leave LCX panels in tied-down tubes, sheathed cable, or flex tubing.

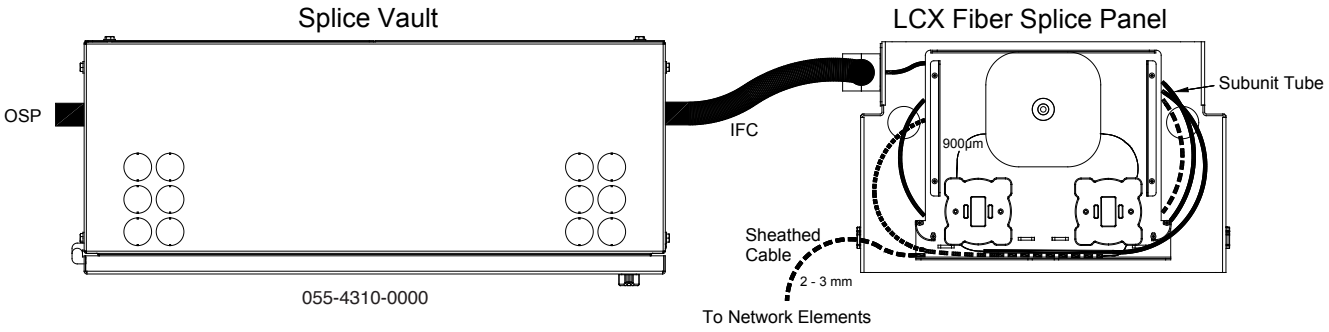

Figure 26 - Interconnecting/Splicing Facility Cable to Network Elements

2.2 Interconnecting Network Elements

In Figure 27, fiber from one set of network elements is interconnected to a second set.

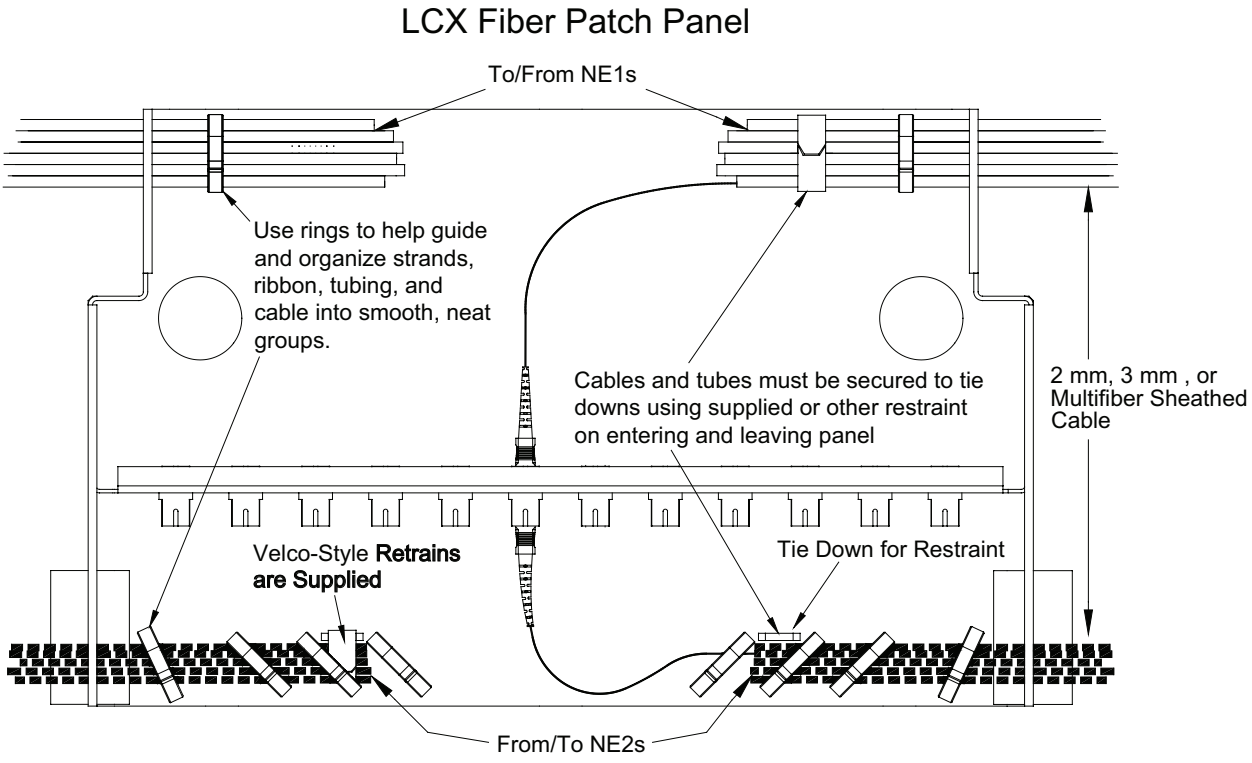
LCX Fiber Patch Panel
To/From NE1s
Use rings to help guide and organize strands, ribbon, tubing, and cable into smooth, neat groups.
Cables and tubes must be secured to tie downs using supplied or other restraint on entering and leaving panel
2 mm, 3 mm , or Multifiber Sheathed Cable
Velco-Style Retrains are Supplied
Tie Down for Restraint
From/To NE2s

Figure 27 - Interconnecting Network Elements in a LCX Fiber Patch Panel

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2.3 Cross-Connecting Network Elements

In a variation of “Interconnecting Network Elements”, NE1s and NE2s are connected to the rear of two LCX Fiber Patch Panels with the fronts reserved for patch cords to cross-connect the two.

Figure 28 shows a stylized version of this application.

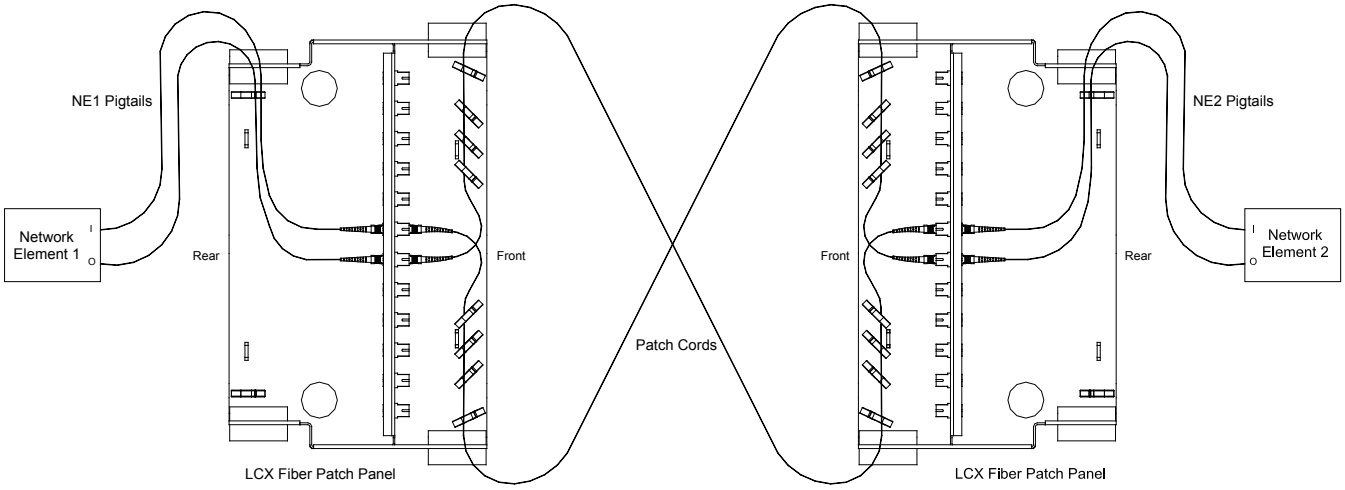

Figure 28 - Cross-Connecting Network Elements

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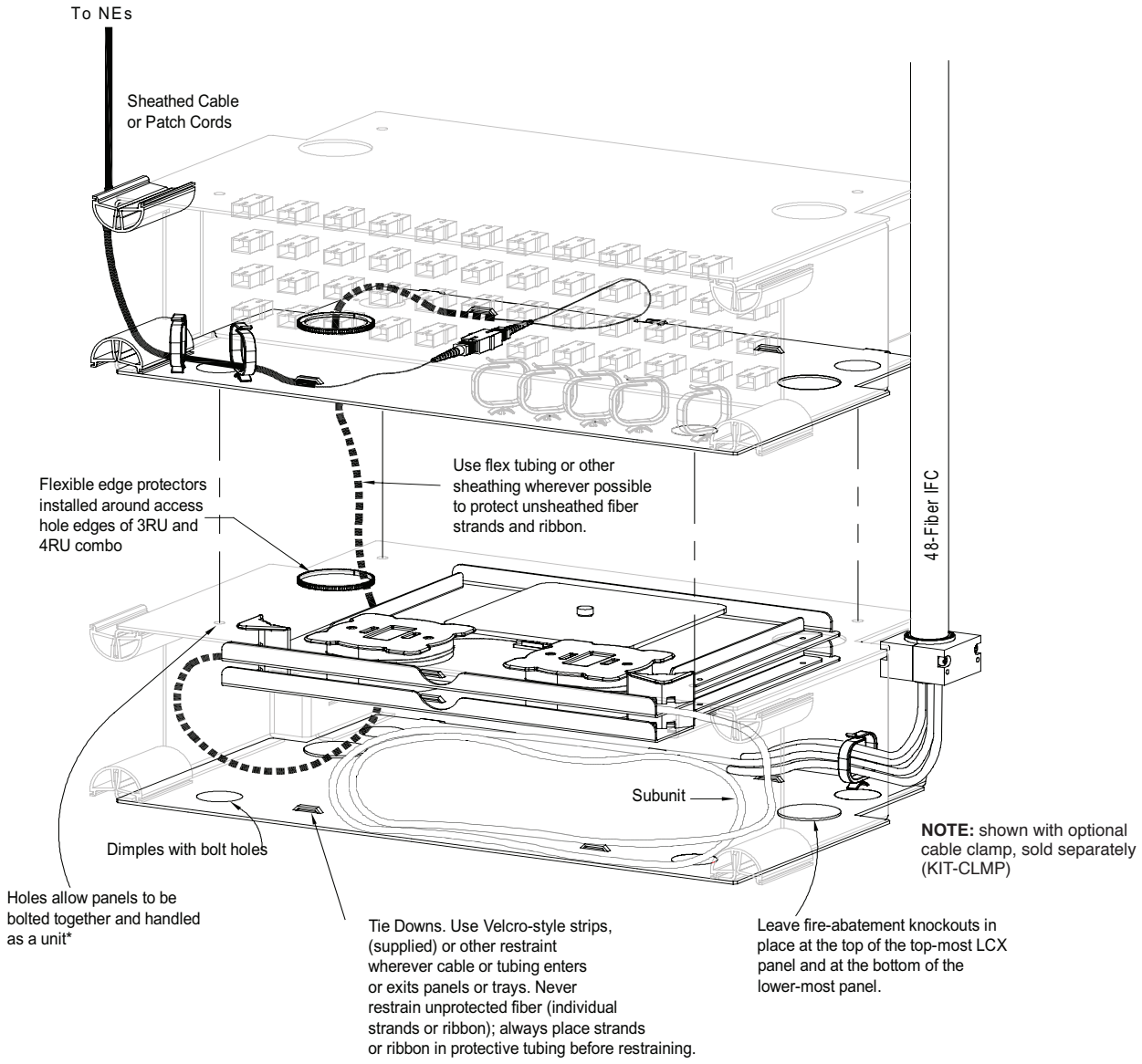
2.4 Cross-Connecting Combinations

LCX Fiber Splice and Patch Panels can be used in combination to cross-connect IFC to network elements.

Figure 29 shows a 48-fiber LCX Combination Panel (a 48-fiber LCX Splice Panel bolted to a 48-fiber LCX Patch Panel). After the incoming IFC is spliced, the fiber strands are passed through the 1½ in. (38.1 mm) diameter hole in the top of the splice shelf to the patch shelf. Notice that flexible edge protectors are used to protect the unsheathed fiber strand passing through holes to an upper panel.

NOTE: *If you create your own combination LCX Splice and Patch Panel onsite, remember to remove knockout plugs at the top and bottom of LCX panels before installing panels in racks. (Knockouts can be removed and flexible edge protectors can be installed around the edge of holes after panels are racked; however, it is easier before panels are racked.) Avoid removing the knockouts on the top of the top-most and bottom of the bottom-most LCX panels. The knockout plugs also provide fire abatement. The hardware for connecting the patch splice together are not included when purchased separately.*


To NEs
Sheathed Cable or Patch Cords
Use flex tubing or other sheathing wherever possible to protect unsheathed fiber strands and ribbon.
Flexible edge protectors installed around access hole edges of 3RU and 4RU combo
48-Fiber IFC
Subunit
NOTE: shown with optional cable clamp, sold separately (KIT-CLMP)
Dimples with bolt holes
Holes allow panels to be bolted together and handled as a unit*
Tie Downs. Use Velcro-style strips, (supplied) or other restraint wherever cable or tubing enters or exits panels or trays. Never restrain unprotected fiber (individual strands or ribbon); always place strands or ribbon in protective tubing before restraining.
Leave fire-abatement knockouts in place at the top of the top-most LCX panel and at the bottom of the lower-most panel.

*Combination LCX panels (patch panel on top; splice panel on bottom) are bolted together at the factory. Combination 3RU and 4RU panels are bolted top to bottom as shown here.

Figure 29 - Cross-Connecting IFC to Network Elements

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2.5 Interconnecting & Cross-Connecting Along with Special Function Modules

Wavelength Division Multiplexing (WDM) and splitter modules can be used in LCX panels.

Figure 30 shows one way a 48-fiber IFC is spliced and then interconnected via splitters/WDMs to network elements.

Notice that three, 3 RU LCX Configurable Panels with dual, 1-to-3 splitters (or dual WDMs) are required for splitting/de-multiplexing the 48 incoming fiber signals.

Dedicated LCX Patch Panels can be used to interconnect/cross-connect the split/de-multiplexed signals with the network elements. In such case,

- Splitting 48 signals three ways requires a 4 RU LCX Patch Panel with 144 adapters
- De-multiplexing 48 signals into two wavelengths requires a 4 RU LCX Patch Panel with 96 adapters.

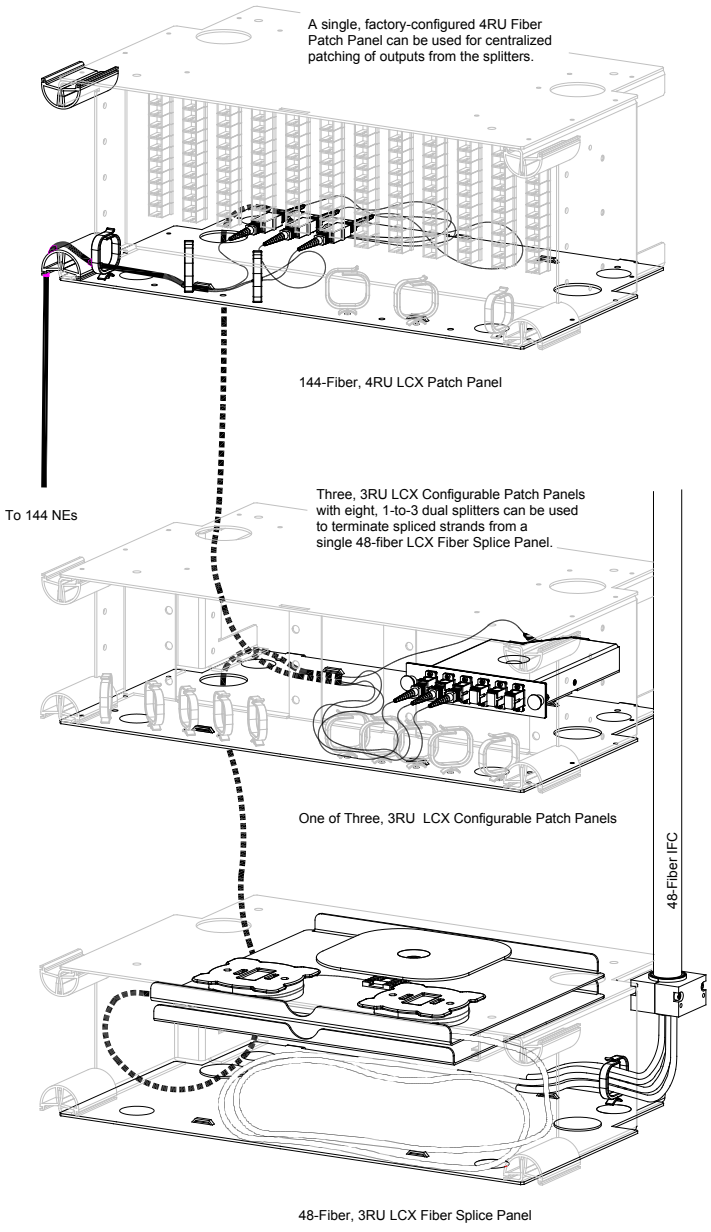
A single, factory-configured 4RU Fiber Patch Panel can be used for centralized patching of outputs from the splitters.
144-Fiber, 4RU LCX Patch Panel
To 144 NEs
Three, 3RU LCX Configurable Patch Panels with eight, 1-to-3 dual splitters can be used to terminate spliced strands from a single 48-fiber LCX Fiber Splice Panel.
One of Three, 3RU LCX Configurable Patch Panels
48-Fiber IFC
48-Fiber, 3RU LCX Fiber Splice Panel

Figure 30 - Interconnecting/Cross-Connecting Along with WDM/Splitter Modules

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3. Panel Installation

3.1 Installation Considerations

WARNING

WARNING! To avoid eye damage or blindness, never look directly into fibers or connectors.

ADVERTENCIA! Para evitar lesiones oculares o ceguera, nunca mire directamente a las fibras o conectores.

AVERTISSMENT! Pour éviter toute lésion occulaire ou cécité, ne regardez jamais directement dans les fibres ou dans les connecteurs.

ALERT

ALERT! This product must be installed and maintained by qualified technicians.

ALERT! These instructions presume you have verified that the Telect equipment being installed is compatible with the rest of the system, including power, ground, circuit protection, signal characteristics, equipment from other vendors, and local codes or ordinances.

3.1.1 Location & Space

LCX Fiber Panels adapt to standard 19 in., 23 in., or ETSI racks with WECO, EIA, or ETSI spacing and nominal 3¼-in. extensions beyond the front rack flange.

Plan the input/output, upward/downward (cable feed) layout of each panel and its position in the rack before beginning LCX panel installation. If you plan to pass fiber strands, cable, and/or tubing through the knocked-out holes in the tops and bottoms of the panels, the panels should be mounted in contiguous vertical rack spaces.

3.1.2 Tools & Equipment

No special tools required.

3.1.3 Inspection

Please read and understand all instructions before starting installation. If you have questions, contact Telect Technical Support at support@telect.com or call 1.509.926.6000.

When you receive the equipment, carefully unpack it and compare it to the packaging list. Please report any defective or missing parts to Telect at support@telect.com or call 1.509.926.6000.

Telect is not liable for transit damaged. If the product is damaged, please report it to the carrier and contact Telect Quality.

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3.2 Panel Installation Procedure (All Except 1RU)

Prepare, mount, and insert modules and cable management rings in all panels in a rack before cabling any panels in the rack.

1. If applicable, if you plan to pass fiber strands, cables, and/or tubing through the 1½ in. (38.1 mm) diameter holes in the tops and bottoms of panels, see the notes below and then knock out the applicable fire-abatement plugs covering these holes, as shown in Figure 31. Install flexible edge protectors, 110048-F01 (or a standard grommet for 1½ in. holes) in place of plugs.

   NOTES:

   - *Avoid removing fire-abatement plugs on the top of the top-most and bottom of the bottom-most panel.*
   - *Plugs can be knocked out when panels are in place on the rack; however, plug removal is easiest before racking panels.*

2. Install standard entry/exit split arcs and/or either optional isolation hooks kits, KIT-CMHOOK or optional entry/exit arc kits, KIT-CMARC at the front and/or rear corners of the panel.

   a. Installing standard split arcs - Slip the arc over the top and/or bottom edges of the chassis at the entry/exit corners. Refer to Figure 32. *Note: two of the provided arcs are longer than the rest. These should go on the bottom rear of the LCX chassis*

   b. Installing an isolation hook kit (purchased separately) - Proceed as follows. Refer to Figure 33.

      - Remove the split arc at the top and bottom of the applicable corner entry/exit.
      - Use the two Phillips head machine screws (screws with cross recessed heads) to secure the hook mounting plate and flat backing plate to either side of the panel sidewall.

   c. Installing an optional arc kit - Proceed as follows. Refer to Figure 34.

   - ***NOTE:*** *Arcs are attached to the angle-shaped mounting bracket using a threadforming screw and an anti-rotation boss. The bracket contains two sets of screw and boss holes so that each arc can be mounted with the arrow-shaped keeper flange pointing either up or down.*
   - Remove the split arc at the top of the applicable corner entry/exit. Leave the split arc at the bottom in place, as shown in the illustration on the right.
   - Use the three thread-forming Phillips head screws (screws with cross-recessed heads) to attach the arcs to the angle bracket. Normally, the arrow-shaped keeper flange of the top two arcs point down and the bottom one points up. For flange clearance, the middle and bottom arcs must use a different set of screw and boss holes.
   - Use the two Phillips head machine screws along with the flat backing plate to secure this arc assembly to the panel.

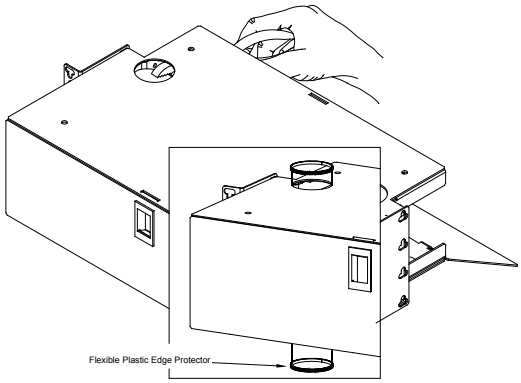

Figure 31 - Removing Knockouts & Installing Plastic Grommets

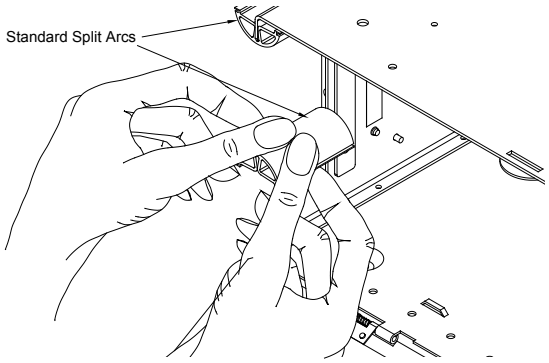

Figure 32 - Installing a Standard Split Arc

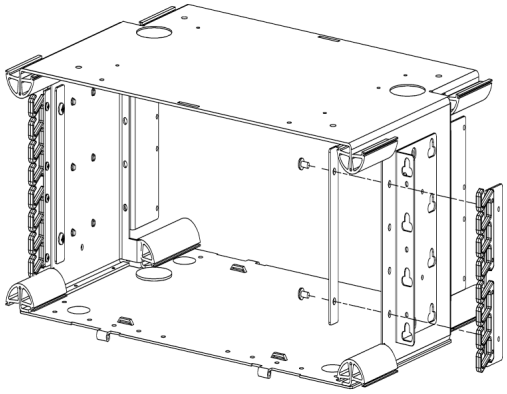

Figure 33 - Installing a Standard Isolation Hook Kit

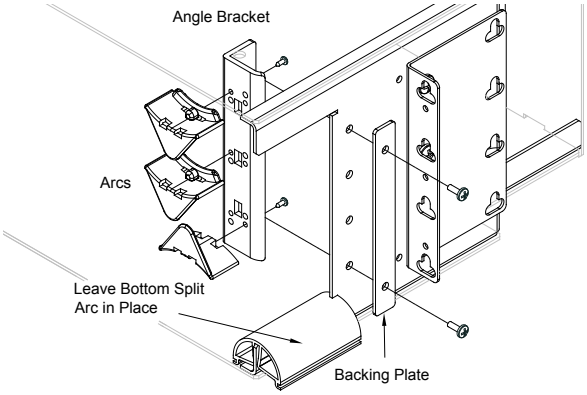

Figure 34 - Installing an Optional Arc Kit

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3. Mount each panel to the rack using four, 12-24, thread-forming mounting screws supplied, two per side. Refer to Figure 35. Torque to 35 in.-lb. (4.29 N•m.). For one of the mounting screws, if desired, include a ground lug and star washer. (Use one ground lug with #14 AWG stranded wire per chassis.)
4. Install adapter packs and/or special function modules in configurable LCX Fiber Patch Panels. Figure 36 shows a 6-adapter pack being installed in a 4 RU LCX Fiber Configurable Patch Panel. Push in quick-connect plungers at both ends of faceplate to lock pack or module in bulkhead.
5. Place a plastic cabling ring at each of the four corners of the chassis, as shown in Figures 37 and 38. Rings can be added and moved around later during cabling. The rings not only serve as corrals for fiber cable but also as guideposts. Cables can be inserted in the split rings or routed around the rings.

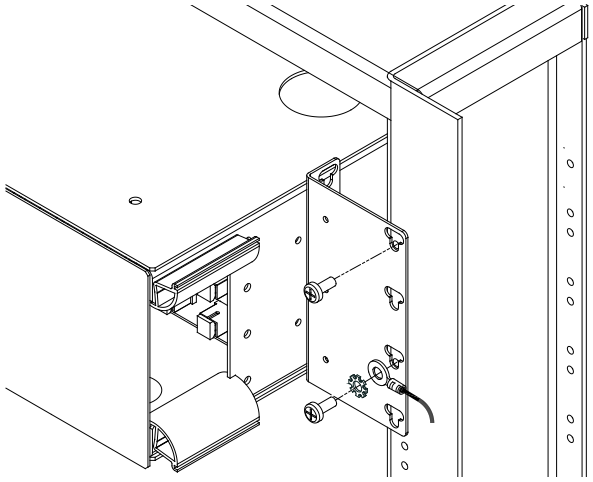

Figure 35 - Mounting LCX Panel to Rack

NOTE: *Each shelf of an LCX Fiber Splice/Patch Combination Panel must be grounded separately.*

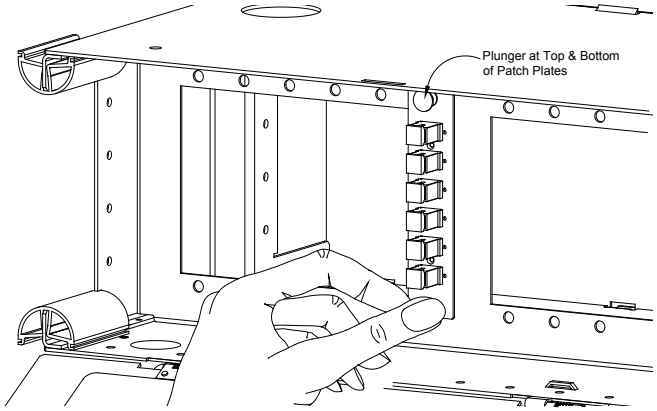

Figure 36 - Installing Adapter Pack & Special Function Modules

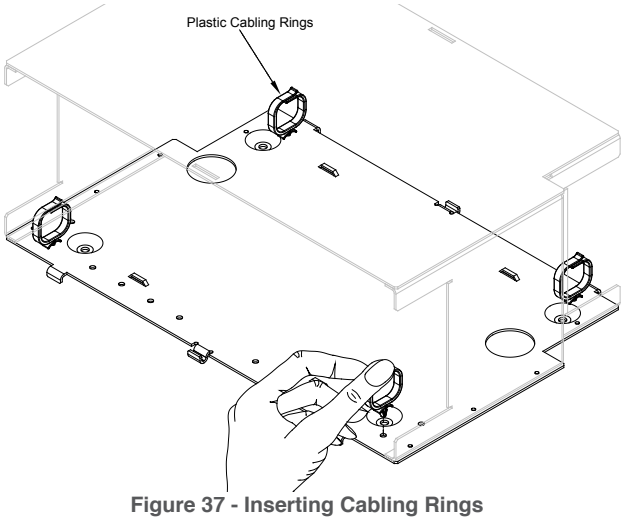

Figure 37 - Inserting Cabling Rings

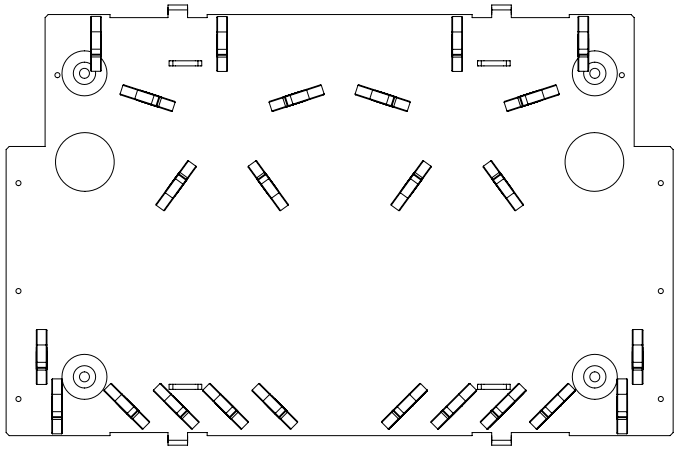

Figure 38 - Cable Restraint Layout (Top View of Chassis Bottom)

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3.3 Panel Installation Procedure (1 RU)

1. Mount each panel to rack using four, 12-24, thread-forming mounting screws supplied, two per side, as shown in Figures 39 and 40. Torque to 35 in.-lb. (4.29 N•m.) With one of the screws, if desired, include a ground lug and star washer. (Use one ground lug and #14 AWG stranded wire per chassis.)

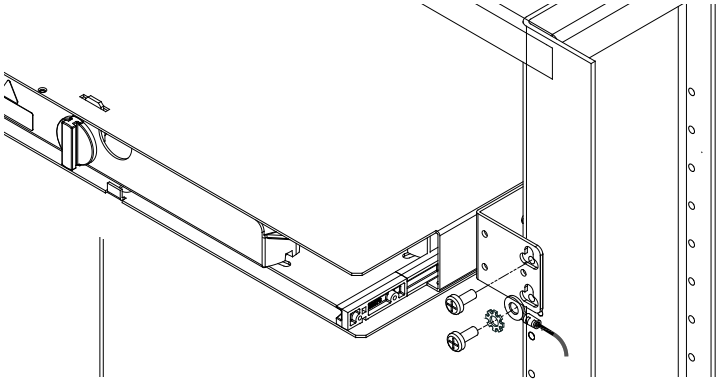

Figure 39 - Mounting 1RU LCX Panel to Rack

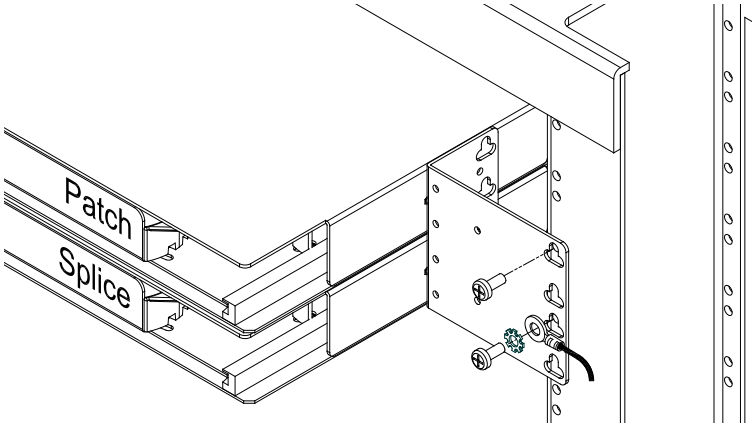

Figure 40 - Mounting 1RU LCX Combo Panels to Rack

NOTE: *Each shelf of an LCX Fiber Splice/Patch Combination Panel must be grounded separately*

2. If applicable, install adapter packs and/or special function modules in configurable LCX Fiber Patch Panels. Figure 41 shows a special-function module being installed in a 1 RU LCX Fiber Configurable Patch Panel. Push in quick-connect plungers at either end of faceplate to lock pack or module in bulkhead.

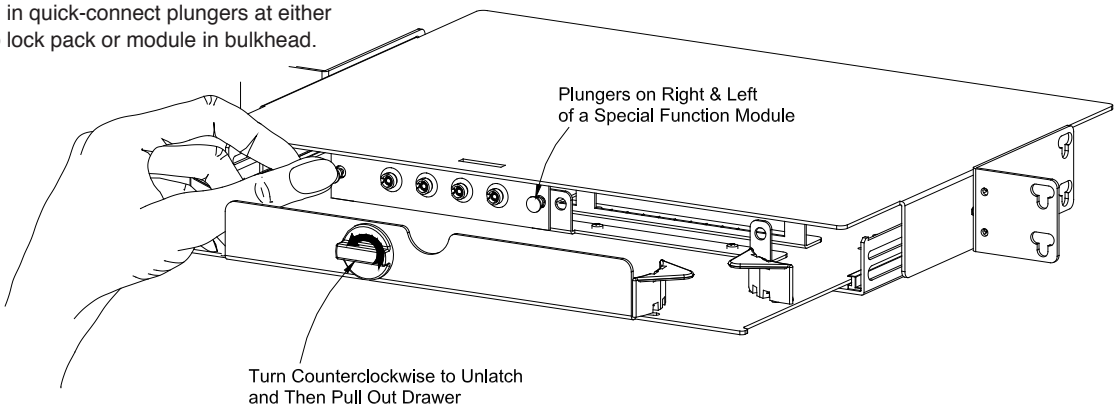

Figure 41 - Installing Patch Plates & Special Function Modules in a 1 RU

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3.4 LCX-H Bulkhead Direction Change

1. Figure 42 - Open both doors on the bulkhead and remove two screws on the fixed stop.
2. Figure 43 - Remove the two screws on the fixed swing.
3. Figure 44 - Remove the bulkhead assembly and rotate it.
4. Figure 45 - Remove the hanger and install it on the opposite side.
5. Figure 46 - Reinstall 4 screws and close the bulkhead.

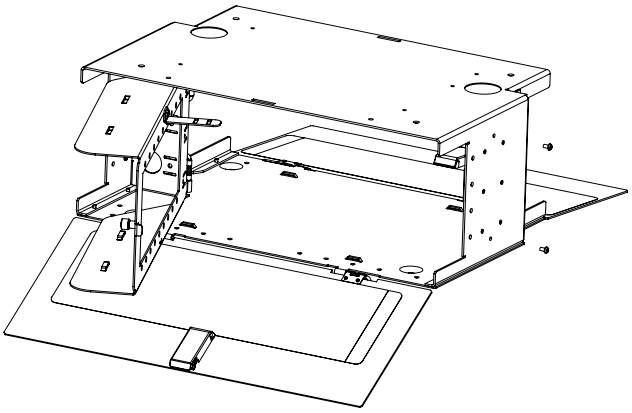

Figure 42 - Open Bulkhead and Remove Screws

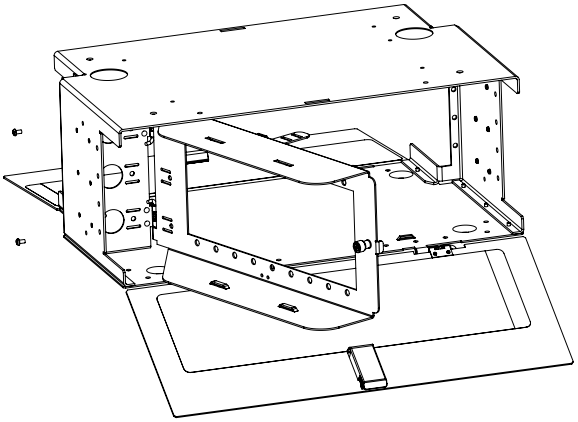

Figure 43 - Remove Screws on the Fixed Swing

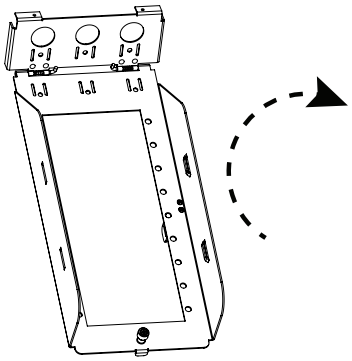

Figure 44 - Remove Assembly and Rotate

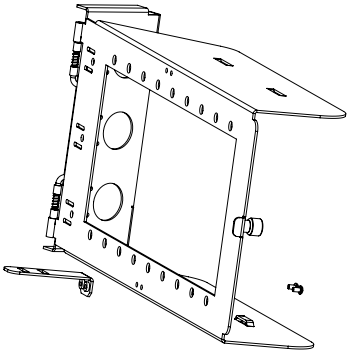

Figure 45 - Remove Hanger and Install Opposite

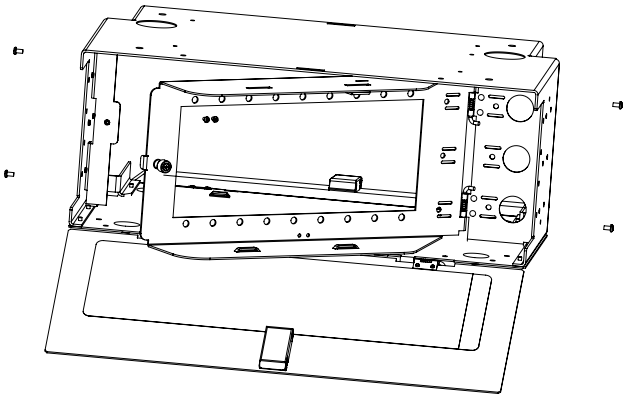

Figure 46 - Reinstall Screws and Close Bulkhead

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4. Fiber Installation

4.1 Fiber Installation Overview

⚠ WARNING

WARNING! To avoid eye damage or blindness, never look directly into fibers or connectors.

ADVERTENCIA! Para evitar lesiones oculares o ceguera, nunca mire directamente a las fibras o conectores.

AVERTISSMENT! Pour éviter toute lésion occulaire ou cécité, ne regardez jamais directement dans les fibres ou dans les connecteurs.

Fiber installation involves splicing, storage, and patching using LCX Splice & Patch Panels. Splicing begins with installation of the IFC at the rear of the LCX Fiber Splice Panel. Each stranded or ribbon IFC subunit contains up to 12 fibers and each LCX splice tray handles up to 24 splices (two subunits of fiber.)

Pairs or groups of tubes containing stranded or ribbon fiber enter the designated tray at one of the four corners (with one of the other corners reserved for corresponding fibers originating from network elements.)

- For 1RU splice trays, the tubes from the IFC or cables from the network elements are wound around a set of arcs and then tied down to the floor of the tray. All fiber storage is on the tray.
- For 2 RU, 3 RU, and 4 RU splice trays, the IFC and cables originating from the network elements are tied down near the front of the splice tray. The unprotected strands or ribbon from the tied-down tubes and cables are wound several times around the two spools on the tray. One of the spools is for the strands or ribbon from the IFC and the other for the network element leads. The bottom of 2 RU, 3 RU, and 4 RU LCX Fiber Splice Panels is used for storing coils of excess tubes and cables.

The loose ribbon or strands are then spliced (interconnected) with the resulting splices placed in one of two, 12-place splice holders on the tray.

LCX Fiber Patch Panels can be used to either interconnect or cross-connect network elements. The panels are typically used to interconnect IFC splices from the LCX Fiber Splice Panel to network elements, to interconnect one system of network elements to another, as in a demarcation, or to cross-connect network elements within the same system.

In all cases, pigtails (connected leads) from the splice panel or jumpers from the network elements are connected to adapters on one side of the patch panel's bulkhead. Corresponding adapters on the other side of the bulkhead are used for interconnecting or cross-connecting complementary network element pigtails, jumpers, or patch cords.

Pigtails/jumpers/patch cords can enter the LCX Fiber Patch Panel at any of the four corners. Plastic rings or optional cable management accessories guide the pigtails/jumpers/cords to the designated adapter.

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4.2 Fiber Installation Procedures (All Except 1 RU)

4.2.1 Splicing (All Except 1 RU)

The paragraphs that follow contain installation and routing procedures required for splicing IFC to network elements in 2 RU, 3 RU,and 4 RU LCX Splice Panels.

4.2.1.1 Installing & Routing IFC Fiber

An optional cable clamp, KIT-CLMP is required for installing IFC to an LCX Fiber Splice Panel. (See Accessories, Section 6.)

1. Route IFC to a rear corner entrance of the LCX Fiber Splice Panel, as shown in Figure 41. IFC can be routed from the bottom up or top down, at either rear corner of the splice panel.

   NOTE: Coiling, routing, and storage of fiber from IFC and network elements work best if the IFC and network element leads exit/enter the splice panel at either the same side of the panel (IFC at the rear and network fiber at the front) or at the two rear corners.
2. Measure an additional 83 in. (2110 mm) and then trim excess IFC.
3. Before clamping IFC to panel, strip away sheathing from this last 83 in. of IFC to expose subunits.
4. For stranded cable, strip away leading 24 in. (610 mm) of tubing to expose 900 µm fiber.

An IFC clamp, sold separately (KIT-CLMP) consists of clamp halves that fit around the IFC. Accommodate various sizes of interfacility cables by using various layers (or leaves) of bushing between the cable and clamp.

The cable clamp kit contains a cylinder of bushing leaves, as shown on the right. Measure the diameter of the IFC, and then remove and discard that much from the interior of the cylinder. The remaining bushing halves are used between the clamp halves and the IFC, as shown in Figure 47.

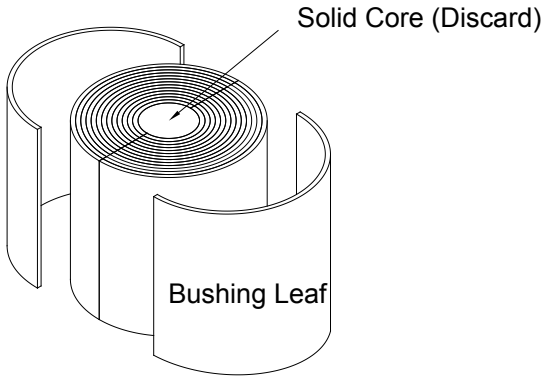

Figure 47 - IFC Clamp

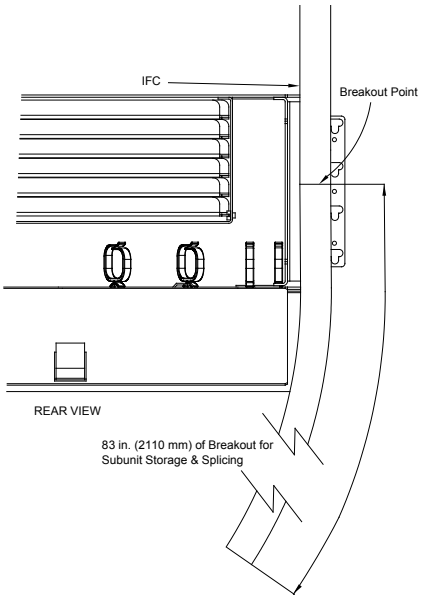

Figure 48 - IFC Breakout Length (2 RU through 4 RU)

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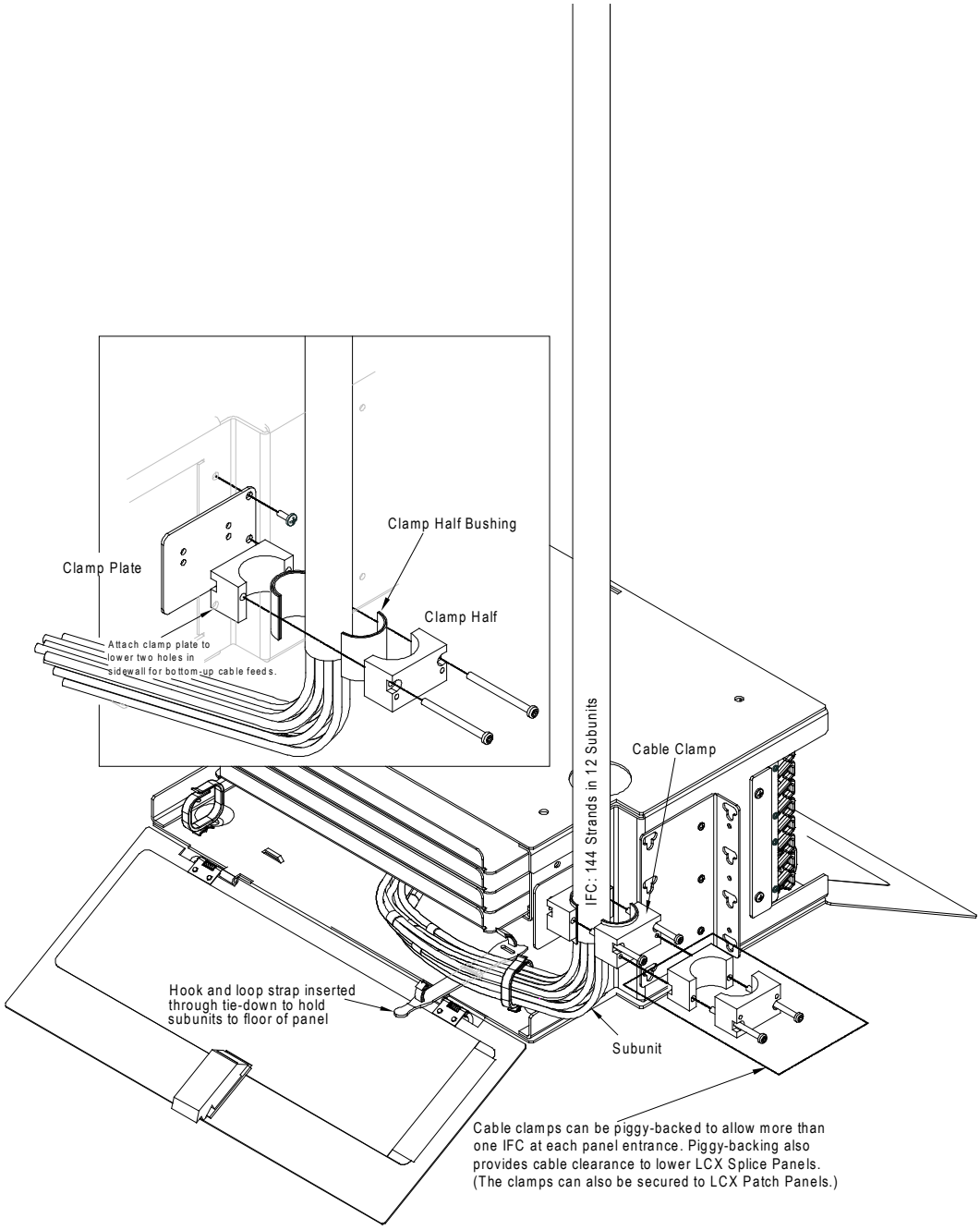
Clamp Half Bushing
Clamp Plate
Clamp Half
Attach clamp plate to lower two holes in sidewall for bottom-up cable feeds.
IFC: 144 Strands in 12 Subunits
Cable Clamp
Hook and loop strap inserted through tie-down to hold subunits to floor of panel
Subunit
Cable clamps can be piggy-backed to allow more than one IFC at each panel entrance. Piggy-backing also provides cable clearance to lower LCX Splice Panels. (The clamps can also be secured to LCX Patch Panels.)

Figure 49 - Installing IFC for Splicing

5. Assemble cable clamp, as shown in Figure 49.
6. For unprotected ribbon fiber, place ~60 in. (~1½ m) of flex tubing over exposed ribbon. The end of the flex tubing should be pushed back to the IFC clamp.
7. Select pairs or groups of tubing for each tray. Tape or tie these together and allow tubes to hang out the front of the panel for splicing.
8. As shown in Figure 49, place tubes in plastic ring at panel entrance and then use supplied cable ties (or other restraint) to tie down tubes to floor of panel.

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4.2.1.2 Installing & Routing Network Element Fiber

Network element fiber cable enters the panel at either the rear corner opposite the IFC or one of the front corners.

1. Route cable to a corner entrance of the LCX Fiber Splice Panel:
   - If network element fiber is gathered in IFC, use a cable clamp at a rear corner, just as you would for IFC from a splice vault.
   - If using discrete fiber cables at a front corner entrance, use a cable management system such as illustrated below.

Network element leads can be routed from the bottom up or top down at either a rear or front corner of the splice panel.

NOTE: *Coiling, routing, and storage of fiber from IFC and network elements work best if the IFC and network element leads exit/enter the splice panel at either the same side of the panel (IFC at the rear and network fiber at the front) or at the two rear corners (one rear corner for the IFC and the other for the network fiber.)*

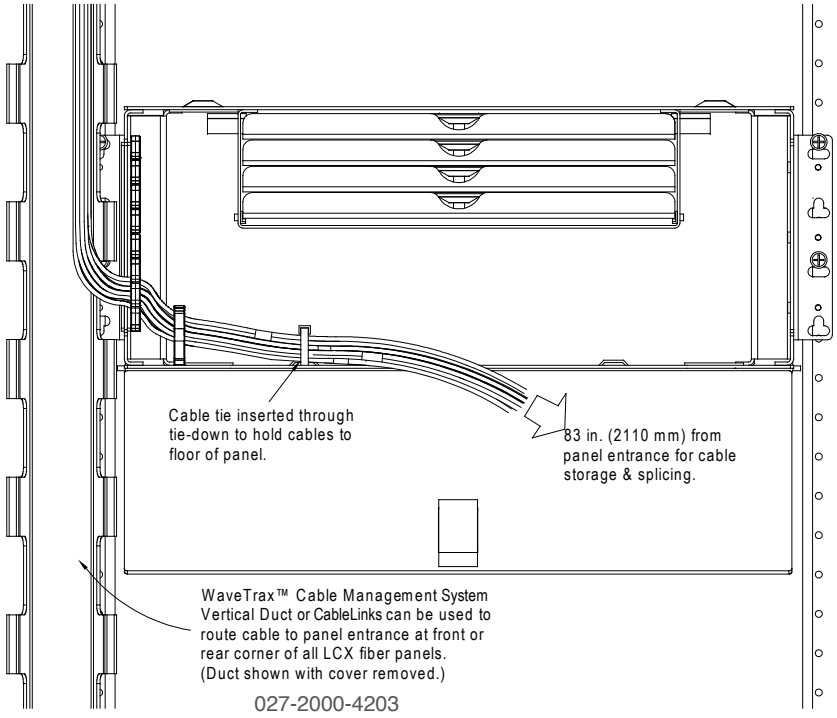
Cable tie inserted through tie-down to hold cables to floor of panel.
83 in. (2110 mm) from panel entrance for cable storage & splicing.
WaveTrax™ Cable Management System Vertical Duct or CableLinks can be used to route cable to panel entrance at front or rear corner of all LCX fiber panels. (Duct shown with cover removed.)
027-2000-4203

Figure 50 - Cable Placement and Securing

2. Measure off an additional 83 in. (2110 mm) and then trim off excess cable.
3. Strip away leading 24 in. (610 mm) of cable sheathing to expose either stranded or ribbon fiber.
4. Select pairs/groups of cable for each tray. Tape or tie together and allow cables to hang out front of panel for splicing.
5. As shown in Figure 50 place cables in plastic ring at panel entrance and then use supplied cable ties (or other restraint) to tie down cables to floor of panel.

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4.2.1.3 Splicing

Start with the bottom-most splice tray and work up.

1. Locate splicing unit within about ~5 ft. (1½ m) of panel.
2. Remove tray from panel and remove splice cover, as shown in the following illustrations.
3. Select a pair or group of tubes and cables for splicing.
4. Use cable ties or other restraint to secure tubes and cables to floor of tray. Note that strands or ribbon always emerge from cables or tubes at the tie down furthest from its tray entrance.
5. Wrap the unprotected strands or ribbon around the nearby adjacent spool.
6. Make splices, place in holder, and then re-attach splice cover.
7. Fill out designation cards located in holders on the inside of front and rear doors.
8. Place tray in panel and then coil tubing and cables, and lay them flat on floor of panel.

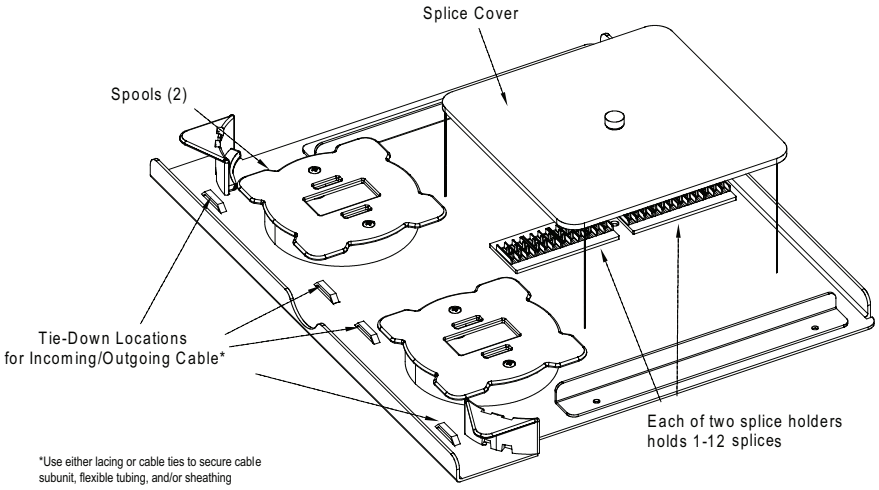

Figure 51 - Splice Tray (Right Corner View)

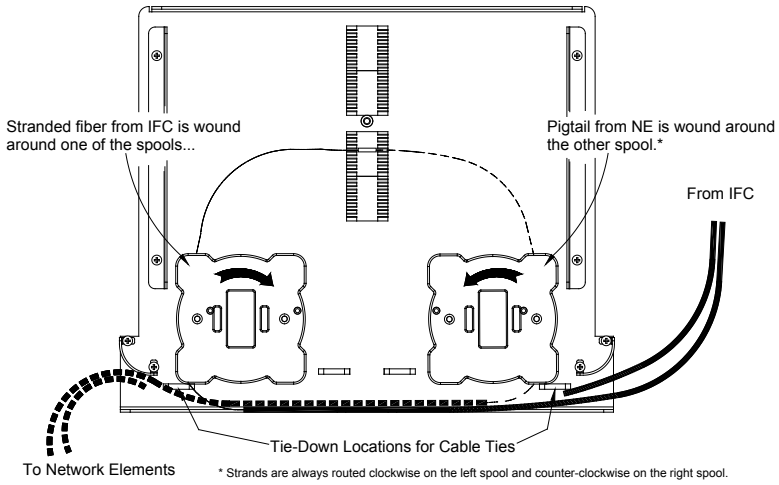
Stranded fiber from IFC is wound
around one of the spools...
Pigtail from NE is wound around
the other spool.*
From IFC
Tie-Down Locations for Cable Ties
To Network Elements
* Strands are always routed clockwise on the left spool and counter-clockwise on the right spool.

Figure 52 - Splice Tray (Fiber Routing)

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4.2.2 Patching (All Except 1RU)

NOTE: *If network element jumpers are routed in IFC cable, use the same type of cable clamp, attached in the same way, as shown in Figure 49. To install pigtails, jumpers, or patch cords:*

1. Route pigtails, jumpers, or patch cords through a plastic ring located at the panel entrance. Refer to Figure 53.
2. In the panel's front compartment, use additional plastic rings to sort and route pigtails, jumpers, or cords from the tie-down to the adapter.
3. Pull out or unscrew the adapter plug and insert the pigtail, jumper, or patch cord connector.
4. After cabling, use cable ties or other restraints to tie down the pigtails/jumpers/cords to the floor of the panel.
5. Fill out designation cards located in holders on the inside of front and rear doors.
6. If applicable, store excess cabling on an appropriate interbay storage frame.

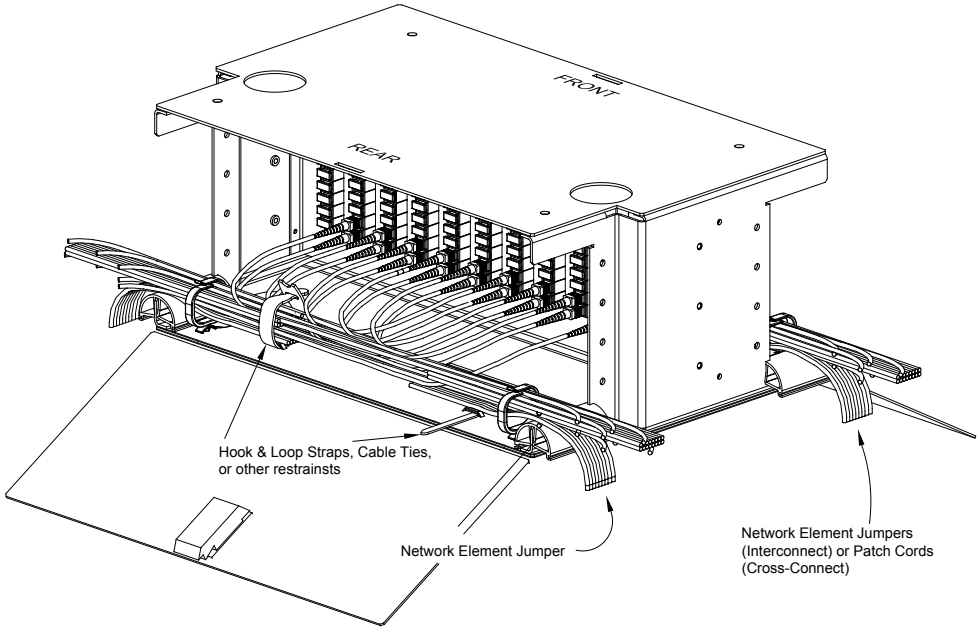

Figure 53 - Installing Interconnects or Cross-Connects in an LCX Fiber Patch Panel

4.3 Fiber Installation Procedures (1 RU)

4.3.1 Splicing (1 RU)

The paragraphs that follow contain installation and routing procedures required for splicing IFC to network elements in a 1RU LCX Splice Panel.

4.3.1.1 Installing & Routing IFC Fiber

An optional cable clamp, 027-1000-1001 is required for installing IFC to an LCX Fiber Splice Panel. (See Accessories, Section 6.)

1. Route IFC to a rear corner entrance of the LCX Fiber Splice Panel, as shown in Figure 54. IFC can be routed from the bottom up or top down, at either rear corner of the splice panel.
2. From a point approximately 2 in. (50 mm) just above or below the panel, measure out an additional 70 in. (1778 mm) and then trim excess IFC.
3. Before clamping IFC to the rack, strip away sheathing from this last 70 in. of IFC to expose subunits.
4. Assemble cable clamp, as shown in Figure 55.
5. For unprotected ribbon fiber, place all of exposed ribbon in flex tubing. The end of the flex tubing should be pushed back to the IFC clamp.
6. Remove the tray and allow the tubing to hang out front of panel.

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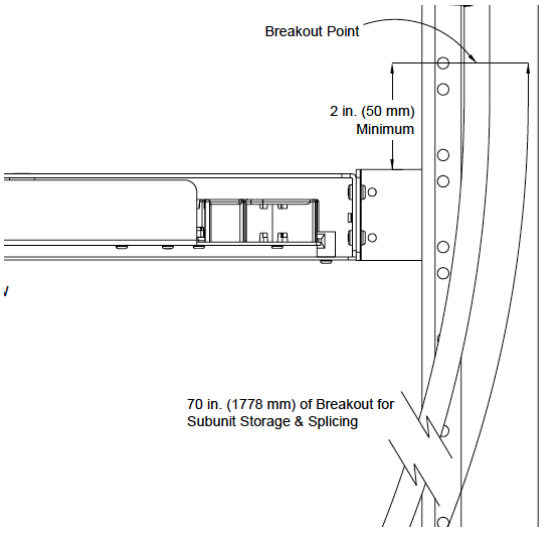

Figure 54 - IFC Breakout Length (1 RU)

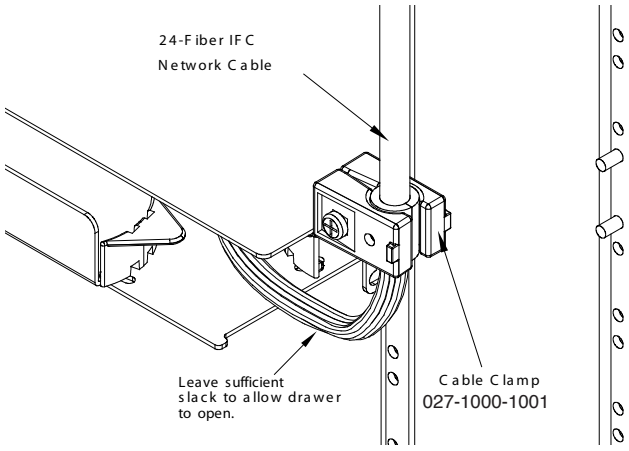

Figure 55 - IFC Breakout Length (1 RU)

4.3.1.2 Installing & Routing Network Element Fiber

Network element fiber cable enters the panel at either the rear corner opposite the IFC or one of the front corners.

1. Route cable to a corner entrance of the LCX Fiber Splice Panel:
   - If network element leads are gathered in IFC, use a cable clamp at a rear corner, just as you would for IFC from a splice vault.
   - If using discrete fiber cables at a front corner entrance, use a cable management system as illustrated in Figure 56.

Network element leads can be routed from the bottom up or top down, at either a rear or front corner of the splice panel.

2. Measure off an additional 70 in. (1778 mm) and then trim off excess cable.

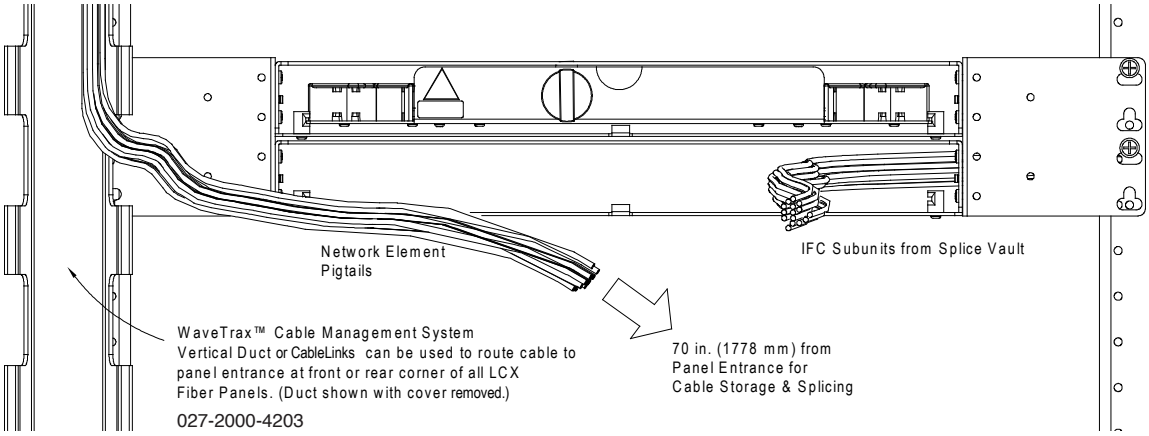
Network Element
Pigtails
IFC Subunits from Splice Vault
WaveTrax™ Cable Management System
Vertical Duct or CableLinks can be used to route cable to
panel entrance at front or rear corner of all LCX
Fiber Panels. (Duct shown with cover removed.)
027-2000-4203
70 in. (1778 mm) from
Panel Entrance for
Cable Storage & Splicing

Figure 56 - Cable Routing

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4.3.1.3 Splicing

1. Locate splicing unit within about ~5 ft. (1½ m) of panel.
2. Remove splice cover from tray, as shown in Figures 57.
3. Strip 6 in. (150 mm) of sheathing from ends of all subunits and cables.
4. Use cable ties or other restraint to secure pairs of tubes to floor of tray, as indicated in the illustrations. The splice holder used for each set of 12 splices is the holder located furthest from the end of the tube at its tie-down point.
5. Trim excess strand to match the selected holder slot, make the splice, and then place in holder.
6. Re-attach splice cover when finished splicing tray.
7. Fill out tray label and affix to front of tray.
8. Place tray in panel. As you do, coil tubes to fit around the central set of 6 arcs in the tray. Do not coil the last 8 in. (200 mm) of tubings around the arcs. These uncoiled lengths of tubing will serve as a service loop, allowing the splice trays to be extended for servicing.

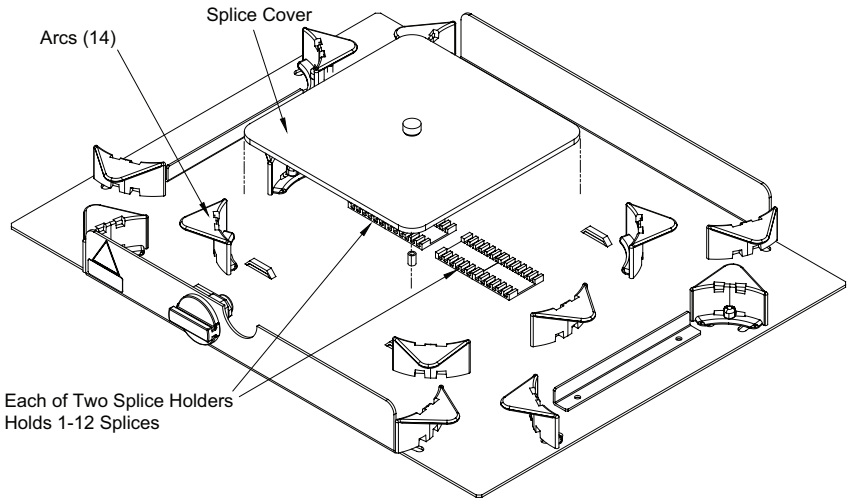

Figure 57 - 1 RU Splice Tray (Right Corner Tray)

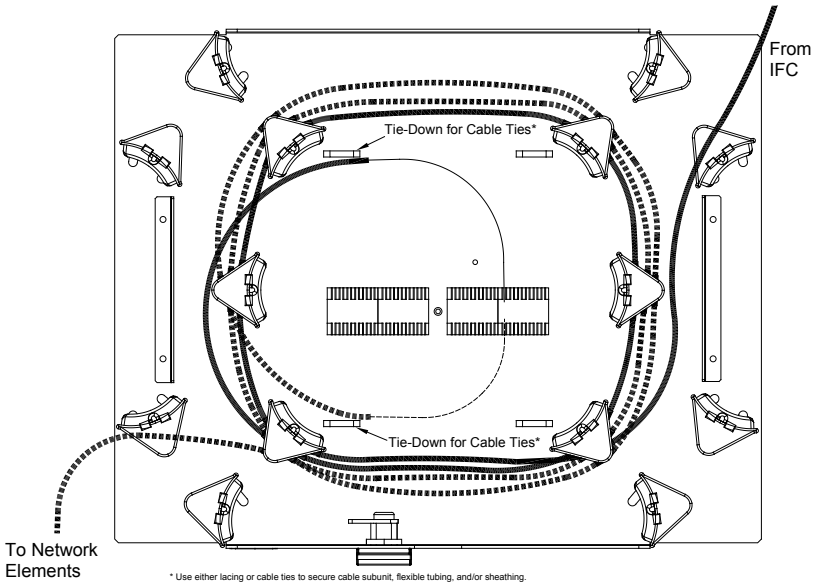
From
IFC
Tie-Down for Cable Ties*
Tie-Down for Cable Ties*
To Network
Elements
* Use either lacing or cable ties to secure cable subunit, flexible tubing, and/or sheathing.

Figure 58 - 1 RU Splice Tray (Fiber Routing)

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4.3.2 Patching (1RU)

LCX 1 RU Patch Panels are cabled similarly to the other panels. If network element jumpers are gathered in IFC cables, use cable clamps as used for LCX 1 RU Splice Panels. To install pigtails, jumpers, or patch cords in an LCX 1 RU Patch Panel:

1. Route pigtails/jumpers/patch cords between pivoting arcs.
2. Pull out or unscrew the adapter plug and insert the cabling connector.
3. After connecting, use hook and loop straps, cable ties, or other restraints to tie down pigtails/jumpers/cords to floor of the panel.
4. Fill out tray label and affix to front of tray.
5. If applicable, store excess pigtails, jumpers, or cords on an appropriate interbay storage frame.

4.3.3 Patching in the LCX-H

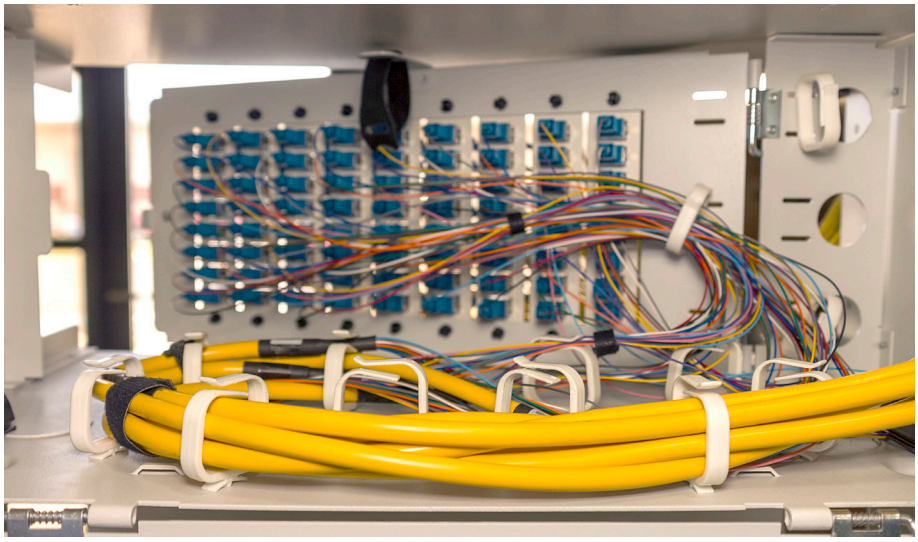

Figure 59 - Patching the LCX-H

1. The cable can be routed in different patterns in the rear depending on amount of slack storage.
2. 900 micron or fiber jumper cables can be anchored on whatever side the hinge is set up to swing.
3. To avoid cable catching on cable rings when hinge is opened, use a Velcro loop on the post of the hinged bulkhead to hold any loose fiber up
4. When routing all fibers out the rear, use cable pass-through holes on the side of the hinged bulkhead.

Figure 60 - Patching the LCX-H

install guide

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5. Service

5.1 Owner Maintenance

Telect's LCX Fiber Panels do not require any preventative maintenance. If equipment is not working properly, contact technical support and be advised of the following warning and alert.

⚠ WARNING

WARNING! To avoid eye damage or blindness, never look directly into fibers or connections.

ADVERTENCIA! Para evitar lesiones oculares o ceguera, nunca mire directamente a las fibras o conectores.

AVERTISSMENT! Pour éviter toute lésion occulaire ou cécité, ne regardez jamais directement dans les fibres ou dans les connecteurs.

ⓘ ALERT

ALERT! This product must be installed and maintained by qualified technicians.

5.2 Technical Support

By e-mail: support@telect.com
By phone: 1-509-926-6000

5.3 In-Warranty Service

Contact your Telect equipment distributor, or call a Telect Customer Service Representative: 1-509-926-6000. Telect will repair or replace defective products within the limits of the warranty. See "Repacking for Shipment" in this section.

NOTE: *Call a Customer Service Representative for a Return Material Authorization (RMA) before returning any equipment.*

5.4 Out-of-Warranty Service

The procedure for out-of-warranty service is the same as for in-warranty service; however, Telect charges a processing fee. You must submit a Purchase Order along with a Return Material Authorization (RMA) before returning equipment. Call Telect for assistance in acquiring these forms.

The processing fee guarantees a repair estimate and is credited against actual material and labor costs.

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5.5 Repacking for Shipment

1. Tag the equipment showing owner's name, address, and telephone number, together with a detailed description of the problem.
2. Use the original shipping container if possible. If you do not have it, package the equipment in a way to prevent shipping damage. Include the RMA inside the container and legibly print the RMA number on the outside of the package, near the shipping address.
3. Insure the package.

NOTE: *Telect is not liable for shipping damage.*

5.6 High Insertion Loss and the Importance of Cleaning Connectors & Adapters

The major causes for poor performance (high insertion loss) are 1) attenuation due to too sharp or too many close radius bends in the fiber cable, 2) loose connections, and 3) dirty connectors or adapters. If you experience insertion loss greater than 2.5 dB, check for sharp bends and loose connections. Clean all polished ferrules on pigtails and both ends of the patch cord or jumper.

Though Telect includes dust caps with all adapters and connectors, it isn't always possible to ensure that fiber ferrules stay clean. If you need to clean connectors and adapters, Telect recommends a commercially available system or solution. Special formulation for cleaning fiber ferrules allows the commercial solvent to stay liquid long enough to dissolve impurities quickly and thoroughly, yet evaporate quickly after wiping dry. Always allow the ferrules to air dry thoroughly before reconnecting. You may use "canned air" to clean away debris initially, but don't use an aerosol after cleaning polished surfaces. Most aerosols contain contaminants.

If a commercial solution isn't available, you may use reagent-grade ethyl alcohol, nominally USP > 99%, available at pharmacies.

Remove both connectors from the adapter.

1. Blow compressed gas through the adapter.
2. Moisten a lint-free wipe with the ethyl alcohol.
3. Wipe completely around the ferrule of the connector twice. Repeat with a dry wipe.
4. Moisten the center area of a third wipe and pass the face of the ferrule from the moistened area outward toward the dry area. Do this twice.
5. Allow ferrule to air dry. After completing this step, do not wipe the ferrule or allow it to touch anything before inserting the ferrule into the adapter. Do not cover with a dust cap.
6. Insert the connector into the adapter.
7. Repeat Steps 2 through 7 for each connector.

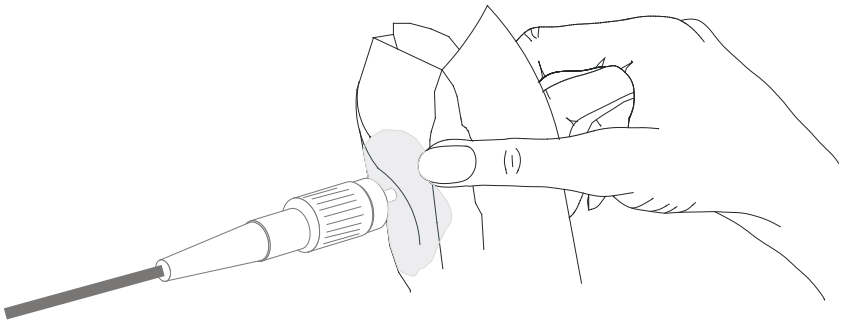

Figure 61 - Cleaning the Adapter

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6. Accessories

6.1 Accessories and Replacement Parts

LCX accessories and replacement items are listed in the following table. Contact Telect for price, availability, and purchase. Order telect.com.

Angled Adaptor Plates	6-port	8-port	12-port	16-port	24-port
SC/UPC	055-0000-6A10	055-0000-6A80	055-0000-6A210		
SC/APC	055-0000-6A70	055-0000-6A90	055-0000-6A270		
LC/UPC			055-0000-5A10	055-0000-5A11	055-0000-5A210
LC/APC			055-0000-5A90	055-0000-5A91	055-0000-5A290
FC/UPC	055-0000-2A10	055-0000-2A80			
FC/APC	055-0000-2A70	055-0000-2A90			
ST/UPC	055-0000-3A10	055-0000-3A80			
MTP/MPO	055-0000-MTA06	055-0000-MTA08			
SC MM	055-0000-6A20	055-0000-6A82	055-0000-6A22		
LC MM			055-0000-5A12	055-0000-5A13	055-0000-2A412

Blank adapter plate: 055-0000-9000; Add -BLK for black adapter plates

Standard Adaptor Plates	Part Number
Patch Plate, 6-Port, FC/UPC	**055-0000-2010**
Patch Plate, 6-Port, FC/APC	**055-0000-2070**
Patch Plate, 8-Port, FC/UPC	**055-0000-2080**
Patch Plate, 8-Port, FC/APC	**055-0000-2090**
Patch Plate, 6-Port, ST/UPC	**055-0000-3010**
Patch Plate, 6-Port, ST Multimode	**055-0000-3020**
Patch Plate, 8-Port, ST/UPC	**055-0000-3080**
Patch Plate, 12-Port, LC/UPC	**055-0000-5010**
Patch Plate, 12-Port, LC Multimode	**055-0000-5012**
Patch Plate, 12-Port, LC/APC	**055-0000-5090**
Patch Plate, 6-Port, SC/UPC	**055-0000-6010**
Patch Plate, 6-Port, SC Multimode	**055-0000-6020**
Patch Plate, 6-Port, SC/APC	**055-0000-6070**
Patch Plate, 8-Port, SC/UPC	**055-0000-6080**
Patch Plate, 8-Port, SC Multimode	**055-0000-6082**
Patch Plate, 8-Port, SC/APC	**055-0000-6090**
Patch Plate, Blank	**055-0000-9000**

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Item	Description		Part Number
IFC Clamp Kit (clamp, bushing, hardware)	For all IFCs up to 144 fibers		KIT-CLMP
	For IFCs with 12 or 24 fibers		027-1000-1001
Heat-Shrink Fusion-Splice Cassette	24-Position Splice Tray for 2 RU Through 4 RU LCX		LCX-S-HSF
Splice Sleeves	Package of 12 Sleeve for splice trays		KIT-SLEEVES
Bonding Kit[1]	GND Kit for Armored OSP Cable		KIT-BOND
Entry/Exit Cable Management	Arc Kit[2]		KIT-CMARC
Hook Kit	4 RU - Front	White Black	KIT-CMHOOK KIT-CMHOOK-BLK
	4 RU - Rear	White Black	KIT-CMRHOOK KIT-CMRHOOK-BLK
	3 RU - Front	White Black	KIT-CMHOOK3RU KIT-CMHOOK3RU-BLK
	3 RU - Rear	White Black	KIT-CMRHOOK3RU KIT-CMRHOOK3RUBLK
Optical Patch Cords	*See telect.com*		
Splitter & WDM Modules			
Multifiber Indoor Cable (MIC)			

1. Kit contains hardware for OSP armored cable from 0.5 in. (12.7 mm) to 0.5 in. (40.64 mm). Kit also contains an 11 in. (~280 mm), 6AWG ground wire assembly with single-hole lugs for #10 studs on both ends.
2. Kit contains three arcs, mounting plates, and hardware for two panel entries/exits. (Fits front or rear corners of 3 and 4 RU LCX panels.)

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